HE
18.5
.A34
no.
DOT-
TSC-
NHTSA-
78-21
v.5

REPORT NOS. DOT-TSC-NHTSA-78-21,V HS-803 542,V

MULTINATIONAL ACTIVITIES OF MAJOR U.S. AUTOMOTIVE PRODUCERS

Volume V -- Diffusion of Production and Sales Operations Abroad

Robert C. Ronstadt
William Casey
J.P. Jeannet
John Marthinsen
Robert Whorf

Robert C. Ronstadt Associates, Inc.
46 Glen Street
Dover MA 02030

SEPTEMBER 1978

FINAL REPORT

Dept. of Transportation
DEC 13 1978
Library

DOCUMENT IS AVAILABLE TO THE U.S. PUBLIC THROUGH THE NATIONAL TECHNICAL INFORMATION SERVICE, SPRINGFIELD, VIRGINIA 22161

Prepared for

U.S. DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
Office of Research and Development
Washington DC 20590

NOTICE

This document is disseminated under the sponsorship of the Department of Transportation in the interest of information exchange. The United States Government assumes no liability for its contents or use thereof.

NOTICE

The United States Government does not endorse products or manufacturers. Trade or manufacturers' names appear herein solely because they are considered essential to the object of this report.

HE 18.5 .A34 no. DOT-TSC-NHTSA-78-21 V.5 c.2

Technical Report Documentation Page

1. Report No.	2. Government Accession No.	3. Recipient's Catalog No.
HS-803 542,V		

4. Title and Subtitle	5. Report Date
MULTINATIONAL ACTIVITIES OF MAJOR U.S. AUTOMOTIVE PRODUCERS Volume V -- Diffusion of Production and Sales Operations Abroad	September 1978
	6. Performing Organization Code
7. Author(s) Robert C. Ronstadt, William Casey, J.P. Jeannet, John Marthinsen, and Robert Whorf	8. Performing Organization Report No. DOT-TSC-NHTSA-78-21, V
9. Performing Organization Name and Address Robert C. Ronstadt Associates, Inc.* 46 Glen Street Dover MA 02030	10. Work Unit No. (TRAIS) HS828/R9401
	11. Contract or Grant No. DOT-TSC-1387-5
12. Sponsoring Agency Name and Address U.S. Department of Transportation National Highway Traffic Safety Administration Office of Research and Development Washington DC 20590	13. Type of Report and Period Covered Final Report July 1977-April 1978
	14. Sponsoring Agency Code

15. Supplementary Notes

*Under contract to: U.S. Department of Transportation
Research and Special Programs Administration
Transportation Systems Center
Cambridge MA 02142

16. Abstract

The multinational activities of General Motors, Ford, Chrysler, and American Motors are documented and analyzed. The study consists of this and four other volumes. Volume I is a summary of the four main volumes. Volume II contains a compilation of data related to multinational operations; specifically it addresses research, development, engineering, production, marketing, and sales activities performed abroad. In Volume III, the research, development, and engineering activities abroad are analyzed. Volume IV provides a preliminary assessment of the technology transfers within each U.S. multinational producer.

Dept. of Transportation
DEC 13 1978
Library

17. Key Words	18. Distribution Statement
Multinational Operations Research And Development Technology Transfer Production And Sales Abroad	DOCUMENT IS AVAILABLE TO THE U.S. PUBLIC THROUGH THE NATIONAL TECHNICAL INFORMATION SERVICE, SPRINGFIELD, VIRGINIA 22161

19. Security Classif. (of this report)	20. Security Classif. (of this page)	21. No. of Pages	22. Price
Unclassified	Unclassified	118	

Form DOT F 1700.7 (8-72) Reproduction of completed page authorized

FOREWORD

This is Volume V on the multi-national activities of the major U.S. automotive producers. Volume II compiled data from public and private sources on their foreign facilities and operations. Volume III evaluates their research, development, and engineering performed abroad. Volume IV presents a preliminary evaluation of the multinational aspects of technology innovation and transfer between the parent organization of the companies and their subsidiaries abroad.

The purpose of this Volume is to evaluate the foreign manufacturing and sales activities of the General Motors Corporation, Ford Motor Company, and Chrysler Corporation.

In the following pages, data, accessed from the databank of the Harvard Business School's Multinational Enterprise Project, are presented, summarized and analyzed. Special programs were written to access the data from General Motors, Ford, and Chrysler Corporation and to foremat the data for variables related to principal activity, location, size, ownership, markets, etc.

AMC is omitted since its multinational diffusion is considerably limited, especially relative to the other three U.S. automotive producers.

For most exhibits, the data represent the number of foreign subsidiaries for various variables. For example, Exhibit 3 shows the number of foreign subsidiaries for several different activities (manufacturing, sales, etc.)

The term "latest" refers to 1976.

The term "at entry" refers to when subsidiaries joined their respective multinational systems.

The term "exited" refers to when subsidiaries left the multinational system.

The term "other" refers generally to non-manufacturing and non-sales subsidiaries that are essentially financial subsidiaries or subsidiaries established for parts distribution and warehousing.

The term "unknown" refers mainly to extremely small sales subsidiaries with sales of less than $1 million, according to the Harvard Project's data coordinator.

Finally, please note that subsidiaries under the R&D category register zero in many exhibits. The zero result means no subsidiary has been created or acquired abroad whose sole or primary purpose is to perform research and development. This conforms with our findings discussed in the Report on the Evaluation of R&D Abroad (Volume III). However, other data from our research and the HBS databank show R&D has been performed abroad within (and secondary to) subsidiaries established primarily for manufacturing purposes.

METRIC CONVERSION FACTORS

Approximate Conversions to Metric Measures

Symbol	When You Know	Multiply by	To Find	Symbol
		LENGTH		
in	inches	2.5	centimeters	cm
ft	feet	30	centimeters	cm
yd	yards	0.9	meters	m
mi	miles	1.6	kilometers	km
		AREA		
in^2	square inches	6.5	square centimeters	cm^2
ft^2	square feet	0.09	square meters	m^2
yd^2	square yards	0.8	square meters	m^2
mi^2	square miles	2.6	square kilometers	km^2
	acres	0.4	hectares	ha
		MASS (weight)		
oz	ounces	28	grams	g
lb	pounds	0.45	kilograms	kg
	short tons (2000 lb)	0.9	tonnes	t
		VOLUME		
tsp	teaspoons	5	milliliters	ml
Tbsp	tablespoons	15	milliliters	ml
fl oz	fluid ounces	30	milliliters	ml
c	cups	0.24	liters	l
pt	pints	0.47	liters	l
qt	quarts	0.95	liters	l
gal	gallons	3.8	liters	l
ft^3	cubic feet	0.03	cubic meters	m^3
yd^3	cubic yards	0.76	cubic meters	m^3
		TEMPERATURE (exact)		
°F	Fahrenheit temperature	5/9 (after subtracting 32)	Celsius temperature	°C

Approximate Conversions from Metric Measures

Symbol	When You Know	Multiply by	To Find	Symbol
		LENGTH		
mm	millimeters	0.04	inches	in
cm	centimeters	0.4	inches	in
m	meters	3.3	feet	ft
m	meters	1.1	yards	yd
km	kilometers	0.6	miles	mi
		AREA		
cm^2	square centimeters	0.16	square inches	in^2
m^2	square meters	1.2	square yards	yd^2
km^2	square kilometers	0.4	square miles	mi^2
ha	hectares (10,000 m^2)	2.5	acres	
		MASS (weight)		
g	grams	0.035	ounces	oz
kg	kilograms	2.2	pounds	lb
t	tonnes (1000 kg)	1.1	short tons	
		VOLUME		
ml	milliliters	0.03	fluid ounces	fl oz
l	liters	2.1	pints	pt
l	liters	1.06	quarts	qt
l	liters	0.26	gallons	gal
m^3	cubic meters	35	cubic feet	ft^3
m^3	cubic meters	1.3	cubic yards	yd^3
		TEMPERATURE (exact)		
°C	Celsius temperature	9/5 (then add 32)	Fahrenheit temperature	°F

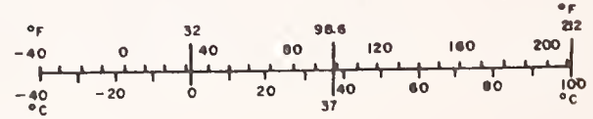


TABLE OF CONTENTS

Section		Page
1.	Objectives	1
2.	Summary of Key Findings	2
3.	Policy Formulation and Theories of International Trade and Investment	4
4.	Decision to Invest in Automotive Production and Sales Subsidiaries Abroad	8
5.	Number, Size and Location of Production and Sales Subsidiaries Abroad	15
6.	Principal Sales Markets of Production and Sales Subsidiaries Abroad	19
7.	Implications of Findings for Theory and Policy	22
8.	Exhibits	26
9.	Glossary	106
Appendix	Report of Inventions	111

1. OBJECTIVES

The principal objective of this report is to analyze the multinational spread of production and sales activities of the three major U.S. automotive producers. The specific objectives are to determine

a) where foreign subsidiaries participate in manufacturing and sales efforts;

b) the timing of these investments in terms of the approximate date when production and sales operations were initiated abroad;

c) the size and general nature of these operations;

d) the purpose of production and sales operations abroad in terms of the final destination of products (domestic market, general exports, exports to the U.S. parent); and,

e) ownership patterns for production and sales subsidiaries abroad.

2. SUMMARY OF KEY FINDINGS

Principal findings derived from recent interviews with automotive managers plus other data spanning the entire history of production and sales investments made abroad by the three major U.S. automotive companies support the Hymer Theory and the Product Life Cycle (PLC) Theories* of U.S. international trade and investment.

The significance of this general observation is discussed at the end of this report. The conclusion reached by this discussion is that an increased likelihood exists for:

a) continual and increased pressure on the U.S. trade position from automotive imports over the long term as long as the existing Product Life Cycle is followed by the U.S. producers;

b) continual expansion abroad by the U.S. automotive multinationals in Latin American, Far Eastern, Middle Eastern, and African markets as a principal source of sales growth as long as the existing Product Life Cycle is followed by the U.S. producers.

The key findings supporting these general observations about the adherence to a blending of the Hymer/PLC Theories by the three major U.S. automotive multinationals come from information about:

---

*Subsequently defined.

a) their motivations for investing abroad;

b) the timing and location of their foreign sales and manufacturing investments;

c) the concentration of their resources abroad over time; and

d) the market destination of sales abroad over time.

3. POLICY FORMULATION AND THEORIES OF INTERNATIONAL TRADE AND INVESTMENT

Our evaluation of the multinational diffusion of sales and production operations includes an assessment of findings in terms of existing theory about international trade and investment. The rationale for this assessment is related to the policy formulation process. In short, we believe the formulation of policy that is derived from knowledge explained by theory is better than policy based on information alone.

Policy formulation is a hazardous process at best. However, we feel the hazards can be lessened if events and activities are explained by partial or general models that provide predictive powers.

Several models or theories exist which provide explanations of international trade and investment. The principal ones are:

a) The Comparative Advantage Theory of International Trade;

b) The Product Life Cycle Model of International Trade;

c) The Hymer Theory of Foreign Direct Investment;

d) The Product Life Cycle Theory of Foreign Direct Investment;

e) The Capital Market Imperfections Theory of Foreign Direct Investment;

f) The Investment Portfolio Theory of Foreign Direct Investment;

g) The Oligopolistic Response Theory of Foreign Direct Investment.

Our purpose is not to describe each of these theories or their numerous variants since other sources provide this service in considerable detail.* Rather, we wish only to summarize the salient points of those theories which were useful in explaining our findings and observations drawn from interviews and data analysis.

Our findings on the multinational spread of sales and production investments by the three major U.S. automotive producers are explained by a combination of three theories: The Product Life Cycle (PLC) Theories of Trade and Investment and The Hyner Theory of Foreign Direct Investment.

The PLC models are partial, non-mathematical, dynamic interpretations of international trade and investment that predict trade and investment flows for some U.S. industries. Exhibit 1 summarizes the salient characteristics

---

*One of the best and most recent summaries is found in Yoshi Tsurumi's Multinational Management: Business Strategy and Government Policy, Ballinger Publishing Co., Cambridge, Mass., 1977, pp. 1-16 and 73-83.

and five phases of the trade model. Exhibit 2 summarizes the process of foreign direct investment predicted by the PLC model.

The blending of the PLC trade model with the investment model presents no difficulty. Both rest on technological advantages developed by U.S. producers and embodied in differentiated products. Over time, these advantages erode, causing predetermined trade and investment effects.

The PLC models of trade and investment are also compatible with Hymer's Theory of Foreign Direct Investment. The critical feature of Hymer's Theory is that a foreign investor must also have some advantage to compete successfully abroad. Hymer hypothesized two advantages which allowed successful foreign investment:

1) economies of scale providing a cost advantage;

2) proprietary knowledge providing a better product advantage, i.e. a differentiated product.

The ensuing analysis shows, we believe, that the three U.S. automotive producers are adhering closely to trade and investment patterns predicted by these theories. Section 4 investigates the general sequence (timing) of investments and motivating factors. Section 5 discusses the geographic concentration of resources abroad. Section 6 looks at the market purpose of automotive investments abroad and their trade patterns.

We have chosen to examine and present these topics because prior research has shown that the PLC model best describes international trade and investment patterns for industries developing high income products. Two reasons these high income products are commercialized earliest in the United Statesare that the requisite U.S. market segment is larger than comparable segments in foreign markets and the U.S. segment is sufficiently large to support the investment in manufacturing operations. The PLC model then predicts the start-up of subsequent manufacturing operations in foreign markets as income levels increase to the point that market segments reach an economic threshold size.

If the PLC model reflects the experience of the U.S. automotive industry, we expect to find a positive association between location and:

a) the timing of investments made abroad, i.e., earlier investments in larger market, high-income nations;

b) the concentration of resources over time in the larger market nations;

c) the commencement and concentration of exports eventually from larger foreign markets.

4. DECISION TO INVEST IN AUTOMOTIVE PRODUCTION AND SALES SUBSIDIARIES ABROAD

Interviews with managers and supporting data provide evidence for two key findings about the decision made by the three major U.S. automotive multinationals to invest in production and sales subsidiaries abroad:

a) the decision to invest in manufacturing abroad is caused initially by a desire to protect existing markets serviced by sales subsidiaries;

b) the decision to make direct investments in manufacturing is caused by a desire to protect proprietary technology.

4.1 FINDING 1: MANUFACTURING ABROAD CAUSED BY NEED TO PROTECT EXPORT MARKETS

Interviews with automotive managers indicated that the companies established sales subsidiaries to handle export sales initially but were forced to consider making manufacturing investments when:

a) the local markets became large enough to support assembly and possibly component manufacturing and the threat arose that competitors might start operations; and/or

b) local governments forced manufacture by imposing high import tariffs and local content requirements.

These views were supported by various sources of information collected during our project.

First, automotive managers noted that sales subsidiaries always preceded the establishment of manufacturing investments abroad. The data presented in Volume II showed, in fact, that sales subsidiaries existed in 28 nations where no manufacturing operations had been established.* Conversely, no nation had only manufacturing operations.

Although these data indicate the sequence of foreign investment by activity, they do not confirm the motivating factors (i.e. emerging market size and/or government decrees). However, data on the timing and location of manufacturing investments do show an early preference for the larger markets of Western Europe (See Exhibit 3, 4 and 5). Also, Exhibit 6 presents data indicating the number of automotive subsidiaries still alive in 1960, 1970 and 1976. These data are partitioned into regional groupings in Exhibit 7. A glance at Exhibit 7 reveals that Western Europe had the largest number of automotive subsidiaries in 1960, 1970 and 1976. However, its domination has deteriorated over the years. In 1960, Western Europe lodged 63% of all non-U.S. automotive subsidiaries. In 1970, this concentration had been reduced to 54% and in 1976, it fell to 51%. (See Exhibit 8)

---

*See Volume II, Foreign Facilities and Operations, Sections 1.3, 2.3, 3.3, 3.4.

Clearly, the deterioration is in relative terms and not in absolute terms; and, it points to the relative growth in other areas of the world. For instance, Latin America increased its subsidiaries by over 150% between 1960 and 1976; the Middle East had a growth of subsidiaries by 250% and the Far East increased its subsidiaries by 570% during these same years. By comparison, Western Europe's growth during this period was 50%. Also, the majority of this growth was from 1960 to 1970. Between 1970 and 1976, only three subsidiaries were added, a growth of approximately 2%.

Finally, the historical record provides support for the impact of legislation on tariffs local content. Exhibit 9 presents information on the approximate date when tariffs, local content requirements etc. occurred and when manufacturing operations commenced for selected nations.

4.2 FINDING 2: DESIRE TO PROTECT PROPRIETARY KNOWLEDGE CAUSES SELECTION OF "DIRECT" INVESTMENT IN MANUFACTURING

The prior information regarding the need to manufacture abroad does not explain why the U.S. automotive multinationals decided to make direct investments in manufacturing themselves as opposed to licensing local suppliers to perform the manufacturing function.

Discussions with automotive managers indicated that the decision to use the direct investment vehicle was

made (and continues to be made) to protect proprietary technology. Interviewees stated that they feared licensing of certain kinds of technology would create foreign suppliers with the capability to compete against them in other foreign markets in the future. Also, extensive licensing in place of direct investment would limit international manufacturing flexibility.

Data on ownership of foreign subsidiaries support the view that preserving proprietary process technology is a critical variable affecting the choice of investment vehicle. The expectation is that majority owned investments should be preferred if proprietary technology is a critical factor.

Exhibits 10 and 11 compare the ownership status of the automotive multinational subsidiaries both "at entry" and "at latest" (i.e., 1976). The number of subsidiaries with 96% to 100% control declined from 118 to 87 in manufacturing and from 142 to 93 in sales. However, if these numbers are transferred into percentage terms, as is done in Exhibit 12, the relative share of wholly-owned subsidiaries to total automotive subsidiaries has changed little over the years. In fact, a calculation of the per cent of majority-held ventures versus the per cent of minority-held ventures shows an increase in the per cent of majority-held manufacturing interests. (See Exhibit 13.)

The three major automotive multinationals shows a clear preference for wholly-owned operations despite the advantages of joint ventures. These advantages include:

1) better management because of superior knowledge of the market;

2) better access to local capital markets;

3) better access to local raw material and other goods markets;

4) faster entry into the market;

5) more relevant technology for the local market.

The major disadvantage in joint ventures is the dilution of control.* Consequently, another way of interpreting the data is to say the three U.S. producers will tend to tolerate joint ventures (dilution of control) over the long haul only when:

a) venture partners offer one or more of the above advantages;

b) the U.S. majors cannot acquire majority control.

In fact, the historical record suggests the U.S. producers may tolerate a joint venture relationship over the long haul only when the partners have proprietary technology the majors feel they need or may need in the future. Otherwise, they will:

1) not enter into the venture;

2) enter but leave if they cannot acquire or retain majority control (e.g. GM in India).

The principal examples are European acquisitions and Japanese minority holdings. For Europe:

---

*For a more elaborate discussion of the costs and benefits associated with joint ventures, see: John Stopford and Louis Wells, Managing the Multinational Enterprise, (Basic Books, N.Y., 1972), p. 101-103.

a) GM's acquisitions of Opel (Germany) and Vauxhall (United Kingdom);

b) Chrysler's acquisitions of Simca (France) in 1958; Routes Motors (United Kingdom) in 1964; and Barrieros Ltd. in Spain.

In Japan:

a) GM's minority position (34%) with Isuzu to provide vehicles (embodied technology) for sale by GM in the United States;

b) Ford's position (50%) with Japanese Automotive Transmission Company;

c) Chrysler's position (15%) with Mitsubishi for production of the Dodge Colt.

Data on ownership classified by national and regional location support these observations. Exhibit 14 separates the ownership of the automotive subsidiaries by country and Exhibit 15 combines these countries into the nine previously defined regions. Exhibit 16 further develops the information in Exhibit 15 by calculating the per cent of each region's subsidiaries falling into the various ownership classifications.

Exhibit 17 reveals the ownership pattern of the fifteen countries abroad with the largest number of subsidiaries of the U.S. automotive companies. Because most of these countries (12 of 15) are West European or Latin American, subsidiaries predominantly fall within the

96-100% ownership categories. An interesting contrast is revealed in the case of Japan where over 70% of the cited subsidiaries are less than 51% owned by the automotive companies. Japanese governmental policies on direct foreign investment and ownership rank, of course, among the most restrictive in the world.

5. NUMBER, SIZE AND LOCATION OF PRODUCTION AND SALES SUBSIDIARIES ABROAD

Analysis of information on the number and size of production and sales subsidiaries established abroad provides three additional findings which support the PLC model. The three findings are:

a) The size of sales and manufacturing operations have grown abroad through a concentration of resources in particular foreign subsidiaries performing manufacturing operations, primarily in Europe;

b) The largest of these manufacturing subsidiaries are older investments operating in larger market nations, principally in Europe;

c) While the very largest of manufacturing subsidiaries are located in Europe, other large manufacturing centers are emerging outside Europe in selected nations, principally Brazil, South Africa, and Australia.

5.1 FINDING 1: CONCENTRATION OF RESOURCES IN PARTICULAR FOREIGN MANUFACTURING SUBSIDIAIRES

First, the largest subsidiaries abroad are manufacturing investments. This observation is valid whether the criterion for largeness is employees (Exhibit 18), sales, assets, or equity investment (Exhibit 19).

Second, the majority of resources in manufacturing and sales investments are located in relatively few subsidiaries and nations abroad. Approximately 50 subsidiaries (of 372) in about a dozen nations (of 59 with operations out of 210 possible nations and territories) constitute the largest investments made by the U.S. producers. In general, the dozen nations represent the largest markets for passenger automobiles.

Exhibits 20 through 25 examine the relative size of resources in terms of sales for different locations.

Exhibit 20 shows sales categories for automotive subsidiaries by country of incorporation. Exhibit 21 partitions these data into their regional groupings. In every region, except Latin America, the majority of subsidiaries have sales over $10 million (summarized in Exhibit 22). In fact, in Western Europe, Africa and Australia/New Zealand, the majority of subsidiaries have sales over $25 million (summarized in Exhibit 22).

Exhibit 23 shows the sales distribution by geographic region. Note that Western Europe alone has the overwhelming majority of subsidiaries in the "greater than $100 million" category. Latin America, on the other hand, has its largest relative concentration in the "less than $1 million" category. As financial size increases, Latin America's world subsidiary share constantly decreases. The Far East demonstrates a direct relationship between financial size and its relative share of total subsidiaries. However, most other regions have the highest relative portion of their subsidiaries in the $1-$10 million sales category. Thus,

even though the subsidiary concentration is deteriorating in Western Europe, the size of European operations vastly overwhelms operations in other foreign regions particularly in less developed areas.

Additional information can be gleaned from related tables. Exhibit 24 rank orders the subsidiaries in each country by financial classification and according to their total number of domestic subsidiaries. Exhibit 25 then transforms the information given in Exhibit 24 into concentration ratios for the top five, ten, and fifteen countries. Note that the top five countries account for over 42% of the "greater than $100 million" category, but only (approximately) 23% and 22% respectively of the"$25-$100 million" and"$10-$25 million" categories. A similar trend is found for both the top ten and top fifteen countries.

The geographic concentration in the automotive industry is clearly seen when one considers that over 86% of all subsidiaries with sales over $100 million are in only fifteen countries. Furthermore, over 77% of the subsidiaries under $1 million, over 52% of the subsidiaries with sales between $1 million and $10 million and nearly 50% of the subsidiaries with sales between $25 million and $100 million are located in these same fifteen countries.

Exhibits 26 through 31 have asset classifications for the multinational subsidiaries which parallel the sales information given in Exhibits 20 through 25. Exhibits 32 through 37 do the same for the equity position of the multinational subsidiaries. In each case, the results derived thus far are reinforced. In fact, the concentration

ratios in assets for the top five, ten and fifteen countries increase in the "$25-$100 million" category and the "greater than $100 million" category, seemingly indicating the relatively greater capital intensiveness of these operations.

5.2 FINDING 2: OTHER LARGE MANUFACTURING CENTERS ARE EMERGING OUTSIDE OF EUROPE

The data in Exhibits 24, 30 and 36 show the existence of sizeable operations outside Europe. For instance, Exhibit 24 has 20 subsidiaries in non-European nations with sales over $100 million. Thirteen of these subsidiaries have assets in excess of $100 million. Equity positions are lower, but the same holds for European subsidiaries. Exhibit 38 summarizes these data drawn from the base exhibits (Exhibits 20, 26 and 32). It shows 8 national locations outside Europe, Canada, and the United States with subsidiaries having more than $100 million in sales. However, two nations have lower asset positions (New Zealand and Venezuela), and only two nations have equity positions in excess of $100 million (Brazil and Japan).

6. PRINCIPAL SALES MARKETS OF PRODUCTION AND SALES SUBSIDIARIES ABROAD

As noted earlier, automotive managers stated their organizations made manufacturing and sales investments abroad mainly to protect markets located within specific nations. Also, they stated some subsidiaries had started exporting to other nations including the United States.

These statements are consistent with the PLC scenario of international trade and investment. An analysis of information on the principal markets of production and sales subsidiaries abroad yields two findings which supports the interpretations of managers and the PLC model. They are:

a) the major market purpose of nearly all subsidiaries established abroad is to provide products and services for specific national markets;

b) a small number of older, larger manufacturing subsidiaries in selected nations (mainly Europe) do most exporting to other nations.

6.1 FINDING 1: PRINCIPAL MARKET IS NATIONAL MARKET FOR BOTH MANUFACTURING AND SALES SUBSIDIARIES

Exhibit 39 shows the number of automotive subsidiaries in each activity along with their share of exports. Exhibit 40 shows the per cent of each activity that falls into the export ranges established in Exhibit 39 . The key message of these exhibits is that both manufacturing and sales activities are performed predominantly for their domestic markets in 1976. In sales, 93.5% of the subsidiaries export less than 10%. While the per cent drops to 61% for the manufacturing subsidiaries the majority still produce predominantly for the domestic market.

In terms of regional exportation, Exhibit 41 shows the number of subsidiaries in each country that fall into the various export categories. Exhibit 42 consolidates these data into their regional groupings. Finally, Exhibit 43 calculates the per cent of each region's subsidiaries that fall into the export classifications. In each region, the overwhelming majority export less than 10% of their products.

6.2 FINDING 2: FEW EUROPEAN MANUFACTURING SUBSIDIARIES DO MOST EXPORTING TO OTHER FOREIGN MARKETS

Data drawn from Exhibit 41 show that 15 subsidiaries in nine nations have 50% or more of their sales going to export markets. Exhibit 44 lists these nations and, excluding Canada, all are located in Europe. A significant share of these exports are, according to company sources, to other nations within Europe. Also,

data in Exhibit 39 show that 11 of these 15 subsidiaries are primarily manufacturing operations. Only 2 "known" sales subsidiaries export more than 50% of their sales.

Exhibit 45 also shows that 20 additional subsidiaries in 13 nations export 10-to-15% of their sales. Including the United States and Canada, European subsidiaries constitute 45% of this group (See Exhibit 44 for percentage breakdown by region). Again, Exhibit 39 shows all 20 subsidiaries were primarily manufacturing investments.

7. IMPLICATIONS OF FINDINGS FOR THEORY AND POLICY

The foreign investments of Ford, General Motors, and Chrysler are considerable in size and impact on the world economy. An examination of data on their sales and manufacturing investments abroad provides direct and indirect evidence which supports the Product Life Cycle models of international trade and investment and the Hymer Theory of foreign direct investment.

No direct (interview) evidence exists which supports the theory of Oligopolistic Response. In fact, indirect evidence shows the three producers entered some major foreign markets at quite divergent times. Also, no direct or indirect evidence was discovered in support of other theories of international trade or investment, specifically the Theory of Comparative Advantage; the Capital Imperfections Market Theory of foreign direct investment; the Investment Portfolio Theory of foreign direct investment.

One interesting finding about the Hymer Theory is that the motivation for direct investment abroad by the U.S. automotive producers is related to the desire to protect "special knowledge", specifically the protection of proprietary product and process technology.

and has nothing to do with economies of scale (which Hymer thought could be a rationale, i.e. lower costs . . . for making foreign direct investments).

The adherence of the major U.S. automotive multinationals to the PLC/Hymer interpretations of international trade and investment provides a basis for distilling a number of policy implications. The specific implications discussed in this report have particular relevance to U.S. public policymakers, although equally important policy implications can be derived for multinational managers or foreign public policymakers.

The major implications for U.S. public policymakers fall into three basic categories. They are balance of payment, employment, and technological innovation implications. The implications are long term in nature; we may witness short-term deviations from them. Also, the policy implications assume the U.S. producers continue to follow the PLC scenario.

Balance of payment considerations relate to the U.S. trade balance for passenger vehicles and net flows of automotive direct investment. The principal trade implication is that the return to a net export position is quite improbable in the future. The factors working against a net export position are:

a) continued import pressure in the U.S. market by foreign competitors and imports by the U.S. producers themselves;

b) reduced exports from the United States as the U.S. producers expand foreign manufacturing centers abroad.

Direct investments in the United States by foreign automotive competitors may soften the import problem but will not strengthen exports. Unless a new PLC is created, the U.S. trade outlook for passenger vehicles is bleak even under plausible optimistic assumptions.

The most likely scenario for U.S. automotive flows of direct investment is continued outflow. The principal growth markets for the three U.S. producers are third world markets where emerging middle classes will be able to afford downsized and traditional sized vehicles. The least uncertainty, lowest risk, fastest payback investments for the U.S. producers are associated with these markets.

The U.S. employment implications of the study's findings are equally pessimistic over the long haul. At best, the foreign investment holdings of the three U.S. producers may provide a continued flow of disembodied technology which may help maintain or even increase U.S. employment. Yet, in a stabilizing, possibly mature

industry, large growth in employment will follow market growth and new manufacturing investment. For the three U.S. producers, significant employment growth will occur abroad, chiefly in third world nations.

The implications of the findings for U.S. innovation, combined with the findings of Volumes III and IV, is that the three U.S. producers may choose to make no major commitment to new (non-traditional) technology. An RD&E strategy consistent with continual expansion of multi-national sales and production calls for heavy emphasis on cost reducing improvements. Incremental advances in conventional technology will be sought in order to produce the operating efficiencies needed to compete in price sensitive, mature product markets.

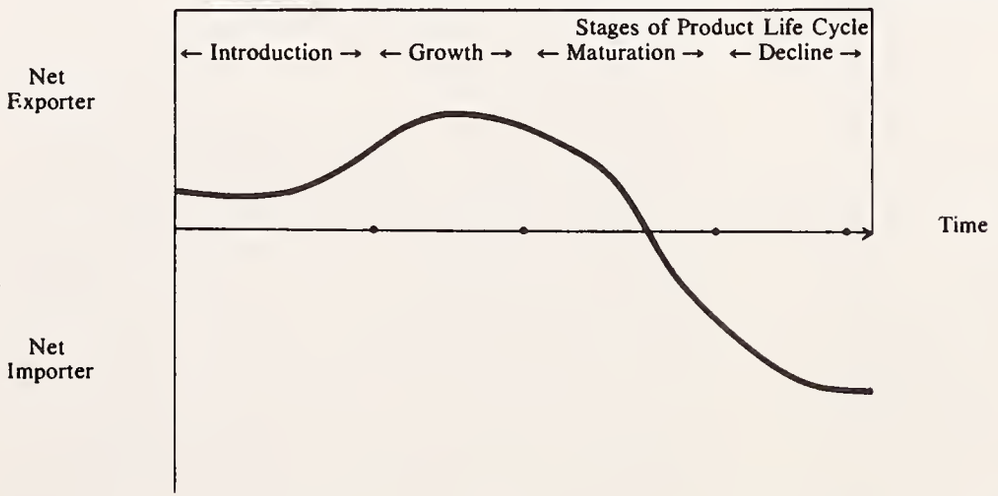
The ironic point is that current U.S. government policy is fostering this "operating efficiency approach" to innovation by the three major U.S. producers. Their RD&E investments in new high-risk projects to develop non-traditional engine and fuel technology are essentially insignificant relative to investments in conventional technology.* But government requirements for incremental improvements in fuel economy, emissions control, and safety require a large portion of these expenditures in traditional technology. While the major U.S. producers complain vocally against these regulations, the government mandates will help them to compete in third world markets where fuel economy, and to a lesser extent, emissions control and safety, are critical issues.

*See Volume 3.

Exhibit 1

Product Life Cycle Model of International Trade

The U.S. (Innovator) Trade Position in the Product Life Cycle Model



Key Considerations	*Phase I*	*Phase II*	*Phase III*	*Phase IV*	*Phase V*
Location of most competitive plants	U.S.	U.S., but European or Japanese production begins	Europe or Japan	Europe or Japan	Less developed countries (LDCs)
Exporter	U.S. exports to many countries	U.S. exports mostly to LDCs	Europe or Japan export to LDCs and replace U.S. exports to LDCs	Europe or Japan export to U.S.	LDCs export to U.S.

Source: Yoshi Tsurumi, Multinational Management: Business Strategy and Government Policy, Ballinger Publishing Co., Cambridge, Mass., 1977, p. 13.

Exhibit 2

Product Life Cycle Model of U.S. Direct Investments Abroad in Manufacturing

Phase I: A large share of world's high/middle income products innovated first in United States because of favorable demand/supply factors. U.S. high/middle income population provides large (often largest) market size for middle/higher income (but not luxury - e.g. Rolls Royces) products. Major supply need is to substitute scarce skilled labor (e.g. European car craftsmen) with unskilled labor and capital (e.g. via moving assembly line). All manufacturing plants (e.g. for Ford's Model T) located in the United States. A technological monopoly exists for initial U.S. producer.

Phase II: Other manufacturing plants located in selected higher income nations. Middle/higher income markets emerge abroad in sufficient size to support local production (usually major European nations first) and/or foreign government willing to subsidize and protect "infant industry". Initial U.S. producers may decide to make foreign direct investment to protect export market, or license technology to foreign suppliers, or do nothing. If technology is initiated by other U.S. or foreign competitors, they may make direct investment and preempt the foreign national market.

Phase III: Manufacturing investments continue to be located abroad by U.S. producer. The largest investments (usually the oldest) begin exporting to lower income nations, substituting U.S. exports in some cases, as capacity exceeds domestic consumption.

Phase IV: The larger, older manufacturing investments (often in Europe and Japan) begin exporting to the United States as they develop unique skills, product/process technology, and capacity exceeds needs of domestic and other third nation markets.

Phase V: Selected nations with large manufacturing investments in lower income nations begin exporting to the United States and other nations.

Exhibit 3

Ford Motor Company

Some Major Dates and Events in Spread of Operations Abroad

Year(s)	Nation(s)	Event
1903	U.S.	N.Y. export agent contracted to handle foreign sales.
1904	U.K.	Export agent contracted
1905	Canada	Assembly of U.S. cars
1905-07	Several Nations	Sales branches and over 20 dealers established in Germany, France, Belgium, Spain, Denmark, Sweden, Austria, and Russia
1911	U.K.	Assembly in Manchester of knocked down units (CKD's)
1912	France	Assembly of CKD's
1914	Argentina	Sales branch established
1916	Argentina	Assembly of CKD's
1919	Denmark	Assembly in Copenhagen
1920	Spain	Assembly in Cadiz
1920	Brazil	Assembly in São Paulo
1920	Uruguay	Assembly in Montevideo
1922	Austria	Assembly in Trieste
1924	Sweden	Assembly in Stockholm
1924	France	Assembly operations expanded
1924	Chile	Assembly in Santiago
1925	Japan	Assembly in Yokahama
1925	U.K.	Assembly operations expanded
1926	Mexico	Assembly in Mexico City
1926	Germany	Assembly in Berlin

Exhibit 3 (continued)

Ford Motor Company

Year(s)	Nation(s)	Event
1925-27	Brazil	Assembly operations expanded
1925-30	South Africa	Assembly started
	Australia	Assembly started
	India	Assembly started
	Ceylon	Assembly started
	Malaysia	Assembly started
1932	U.K.	Major Manufacturing complex starts operation in Dagenham
1932	Germany	Major Manufacturing complex starts operation in Cologne
1932	Netherlands	Some local manufacturing
	Japan	Some local manufacturing
	Turkey	Some local manufacturing
	South Africa	Some local manufacturing
	Mexico	Some local manufacturing
Early 1970s	Brazil Argentina	Brazil begins shipping cam shafts to Argentina and latter ships rocker arms to Brazil
Early 1970s	Australia New Zealand	Both national sales begin exchanging chassis parts
1972	France	Large transmission plant started in Bordeaux for 100% export to other European subsidiaries
1948	U.S.	International Division formed
1954	France	Sell operations to Simca
1954	Spain	Divest operations
1954	Italy	Divest operations
1964	South Africa	$11 million engine plant constructed
1969	U.K. Germany	Automotive complementation begins; started with tractors in 1967; Capri jointly produced by U.K. and Germany as first European car
Early 1970s	Mexico	Begin shipping engines to Venezuela; also begin shipping engine blocks to U.S.

Exhibit 4

General Motors Corporation

Some Major Dates and Events in Spread of Operations Abroad

Year(s)	Nation(s)	Event
1919	France	Attempt to acquire Citroen is unsuccessful
pre-1925	Various Nations	Export operations through sales agents and subsidiaries
1925	U.K.	Vauxhall Ltd is acquired for $2.6 million
1926	Australia	GM Australia established for assembly operations
1929	Germany	Adam Opel A.G. is acquired 80% majority share for $26 million. In 1931, remaining 20% purchased for $7.4 million
1931	Australia	Holden acquired and merged with GM Australia Ltd.

Exhibit 5

Chrysler Corporation

Some Major Dates and Events in Spread of Operations Abroad

Year(s)	Nation(s)	Event
1958	France	15% of Simca acquired from Ford
1963	France	Share of Simca increased to 64% (purchased from Fiat). Later increased again to 77%
1964	U.K.	Minority share of Rootes Motors Ltd. acquired
1967	U.K.	Majority share of Rootes Motors Ltd. acquired
1967	South Africa	Manufacturing complex built in Pretoria for $35 million to replce older Capetown facilities acquired with Rootes acquisition.

Exhibit 6

Number of foreign Subsidiaries Still Existing As Separate Legal Entities in 1960, 1970, 1976 Classified by Geographic Location

YEAR:		1960	1970	1976
CODE	COUNTRY			
1	INTERNATIONAL (	0	0	0
1	ZZ=(OLD: ASIA A	0	0	0
1	ZZ=(OLD: EUROPE	0	0	0
1	ZZ=(OLD: WESTER	0	0	0
101	AUSTRALIA	6	14	16
102	CANADA	26	33	36
103	NE= ZEALAND	3	3	3
104	RHODESIA	2	2	2
105	ST. PIERRE AND	0	0	0
106	SOUTH AFRICA	4	8	6
107	SOUTH WEST AFRI	0	0	0
108	UNITED STATES	17	24	21
109	ANTIGUA	0	0	0
200	CENTRAL AMERICA	0	0	0
200	ZZ=(OLD: BRITIS	0	0	0
202	BAHAMAS	0	0	0
203	BARBADOS	0	0	0
204	BERMUDA	1	2	2
205	BELIZE (BRITISH	0	0	0
205	BRITISH HONDURA	0	0	0
206	CANAL ZONE (PAN	0	0	0
207	COSTA RICA	0	0	0
208	CUBA	0	0	0
209	DOMINICA	0	0	0
210	DOMINICAN REPUB	0	0	0
211	EL SALVADOR	0	0	0
212	GRENADA	0	0	0
213	GUADELOUPE	0	0	0
214	GUATEMALA	0	0	0
215	HAITI	0	0	0
216	HONDURAS	0	0	0
217	JAMAICA	1	1	1
218	MARTINIQUE	0	0	0
219	MEXICO	5	10	10
220	DUTCH (NETHERLA	0	2	2
220	DUTCH (NETHERLA	0	0	0
220	NETHERLANDS (DU	0	0	0
220	NETHERLANDS (DU	0	0	0
221	NICARAGUA	0	0	0

DATA FOR U.S. AUTOMOTIVE MULTINATIONALS
SUBSIDIARIES STILL ALIVE IN 1960, 1970, 1976

CODE	COUNTRY	1960	1970	1976
222	PANAMA	0	1	1
223	PUERTO RICO	0	0	0
224	ST. KITTS-NEVIS	0	0	0
225	ST. LUCIA	0	0	0
226	ST. VINCENT	0	0	0
227	TRINIDAD AND TO	0	0	0
228	VIRGIN ISLANDS	0	0	0
300	LATIN AMERICA (	0	0	0
301	BOLIVIA	0	0	0
302	CHILE	0	2	1
303	COLOMBIA	0	4	6
304	ECUADOR	0	0	0
305	PERU	2	4	4
306	ARGENTINA	4	10	9
307	BRAZIL	3	11	13
308	FRENCH GUIANA	0	0	0
309	BRITISH GUYANA	0	0	0
309	BRITISH GUYANA	0	0	0
309	GUIANA (BRITISH	0	0	0
309	GUIANA (BRITISH	0	0	0
310	PARAGUAY	0	0	0
311	DUTCH GUIANA (S	0	0	0
311	SURINAM (DUTCH	0	0	0
312	URUGUAY	2	2	3
313	VENEZUELA	4	6	7
401	BELGIUM	3	4	5
402	FRANCE	15	17	20
403	GERMANY (WEST,	11	16	13
404	ITALY	3	10	6
405	LUXEMBOURG	0	1	1
406	NETHERLANDS	3	3	4
407	DENMARK	4	6	6
408	IRELAND	2	4	5
409	UNITED KINGDOM	21	32	36
410	AUSTRIA	2	3	3
411	CYPRUS	0	0	0
412	FINLAND	2	2	2
413	GREECE	0	0	0
414	ICELAND	0	0	0
415	LIECHTENSTEIN	0	0	0

Exhibit 6 continued

DATA FOR U.S. AUTO DRIVE MULTINATIONALS
SUBSIDIARIES STILL ALIVE IN 1960, 1970, 1976

CODE	COUNTRY	YEAR: 1960	1970	1976
416	ITALIA	0	0	0
417	MONACO	0	0	0
418	NORWAY	1	3	3
419	PORTUGAL	1	2	1
420	SPAIN	0	5	5
421	SWEDEN	4	1	5
422	SWITZERLAND	4	7	7
501	ALBANIA	0	0	0
502	ANDORRA	0	0	0
503	BULGARIA	0	0	0
504	CZECHOSLOVAKIA	0	0	0
505	GERMANY (EAST)	0	0	0
506	GIBRALTAR	0	0	0
507	HUNGARY	0	0	0
508	POLAND	0	0	0
509	RUMANIA	0	0	0
510	SAN MARINO	0	0	0
511	USSR (RUSSIA)	0	0	0
512	YUGOSLAVIA	0	0	0
601	ALGERIA	0	1	1
602	IRAN	0	0	1
603	IRAQ	0	0	0
604	KUWAIT	0	0	0
605	LIBYA	0	0	0
606	QATAR	0	0	0
607	SAUDI ARABIA	0	0	1
608	SYRIA	0	0	0
609	TRUCIAL STATES	0	0	0
610	BAHRAIN	0	0	0
611	CHAD	0	0	0
612	DHOFAR	0	0	0
613	DUBAI	0	0	0
614	ISRAEL	0	0	0
615	JORDAN	0	0	0
616	LEBANON	0	0	0
617	MALI	0	0	0
618	MAURITIANA	0	0	0
619	MOROCCO	1	1	1
620	MUSCAT AND OMAN	0	0	0
621	NIGER	0	0	0

Exhibit 6 continued

DATA FOR U.S. AUTOMOTIVE MULTINATIONALS
SUBSIDIARIES STILL ALIVE IN 1960, 1970, 1976

YEAR:		1960	1970	1976
CODE	COUNTRY			
622	SOMALI REPUBLIC	0	0	0
623	ADEN (SOUTHERN	0	0	0
623	SOUTHERN YEMEN	0	0	0
624	SPANISH NORTH A	0	0	0
625	SUDAN	0	0	0
626	TUNISIA	0	1	1
627	TURKEY	0	1	1
628	EGYPT (UNITED A	1	1	1
629	UNITED ARAB REP	0	0	0
629	YEMEN	0	0	0
701	AFGHANISTAN	0	0	0
702	CEYLON	0	0	0
703	INDIA	0	0	1
704	MALDIVE ISLAND	0	0	0
705	NEPAL	0	0	0
706	PAKISTAN	1	0	0
707	SEYCHELLES	0	0	0
708	SIKKIM	0	0	0
709	BANGLADESH	0	0	0
800	AFRICA (N.E.S.)	0	0	0
806	ZZ-(OLD; CENTRA	0	0	0
800	ZZ-(OLD; EAST A	0	0	0
800	ZZ-(OLD; NORTH	0	0	0
800	ZZ-(OLD; WEST A	0	0	0
801	ARABS AND ISSAS	0	0	0
801	FRENCH SOMALILA	0	0	0
802	ANGOLA	0	0	0
803	BOTSWANA	0	0	0
804	BURUNDI	0	0	0
805	CAMEROON	0	0	0
806	CAPE VERDE ISLA	0	0	0
807	CENTRAL AFRICAN	0	0	0
808	COMORO ISLANDS	0	0	0
809	CONGO, FRENCH	0	0	0
809	DEM. CONGO (BRA	0	0	0
810	DAHOMEY	0	0	0
811	EQUATORIAL GUIN	0	0	0
812	ETHIOPIA	0	0	0
813	GABON	0	0	0
814	GAMBIA	0	0	0

Exhibit 6 continued

DATA FOR U.S. AUTOMOTIVE MULTINATIONALS
SUBSIDIARIES STILL ALIVE IN 1960, 1970, 1976

YEAR:		1960	1970	1976
CODE	COUNTRY			
815	GHANA	0	0	0
816	GUINEA	0	0	0
817	IVORY COAST	0	0	0
818	KENYA	1	1	0
819	LESOTHO	0	0	0
820	LIBERIA	0	0	0
821	MALAGASY REPUBL	0	0	0
822	MALAWI	0	0	0
823	MAURITIUS	0	0	0
824	MOZAMBIQUE	1	1	1
825	NIGERIA	0	0	0
826	PORTUGUESE GUIN	0	0	0
827	REUNION	0	0	0
828	RWANDA	0	0	0
829	SAO TOME AND PR	0	0	0
830	SENEGAL	0	0	0
831	SIERRA LEONE	0	0	0
832	SWAZILAND	0	0	0
833	TANZANIA	0	0	0
834	TOGO	0	0	0
835	UGANDA	0	0	0
836	UPPER VOLTA	0	0	0
837	ZAMBIA	0	0	0
838	CONGO, BELGIAN	1	1	2
838	REP. CONGO (ZAI	0	0	0
838	ZAIRE (REP. OF	0	0	0
839	MADAGASCAR	0	0	0
901	AMERICAN SAMOA	0	0	0
902	BRITISH SOLOMON	0	0	0
903	BRUNEI	0	0	0
904	BURMA	0	0	0
905	CAMBODIA	0	0	0
906	CHINA (MAINLAND	0	0	0
907	CHINA (TAIWAN)	0	0	1
907	TAIWAN	0	0	0
908	FIJI	0	0	0
909	FRENCH POLYNESI	0	0	0
910	GUAM	0	0	0
911	HONG KONG	0	0	0
912	INDONESIA (2ND	0	0	0

Exhibit 6 continued

DATA FOR U.S. AUTOMOTIVE MULTINATIONALS
SUBSIDIARIES STILL ALIVE IN 1960, 1970, 1976

YEAR:		1960	1970	1976
CODE	COUNTRY			
912	INDONESIA (1ST	0	0	0
913	JAPAN	2	4	7
914	KOREA (NORTH)	0	0	0
915	KOREA (SOUTH)	0	0	1
916	LAOS	0	0	0
917	MACAO	0	0	0
918	MALAYSIA	0	0	1
919	MONGOLIA	0	0	0
920	NEW CALEDONIA	0	0	0
921	NEW GUINEA AND	0	0	0
922	NEW HEBRIDES	0	0	0
923	PHILLIPINES	0	2	3
924	PORTUGUESE TIMO	0	0	0
925	RYUKYU ISLANDS	0	0	0
926	SINGAPORE	1	2	4
927	THAILAND	0	1	3
928	TONGA	0	0	0
929	VIETNAM (NORTH)	0	0	0
930	VIETNAM (SOUTH)	0	0	0
931	WESTERN SAMOA	0	0	0
	TOTAL	168	275	296

Source: Harvard's Multinational Enterprise Databank.

Exhibit 6 continued

EXHIBIT 7

Data for U.S. Automotive Multinationals Number of Subsidiaries Still Alive in 1960, 1970, 1976

Area	Year 1960	1970	1976
North America	43	57	57
Latin America	22	55	59
Western Europe	79	119	122
Eastern Europe	0	0	0
Middle East	2	5	7
Near East	1	0	1
Africa	9	13	11
Far East	3	9	20
Australia/New Zealand	9	17	19
Total	168	275	296

Source: Consultants' calculations based on Exhibit 6 .

EXHIBIT 8

Data for U.S. Automotive Multinationals Subsidiaries Still Alive in 1960, 1970, 1976: Percentages

Area	Year 1960	1970	1976
		Percentage	
North America	25.6	20.7	19.3
Latin America	13.1	20.0	19.9
Western Europe	47.0 *	43.3 *	41.2 *
Eastern Europe	0	0	0
Middle East	1.2	1.8	2.4
Near East	0.6	0	0.3
Africa	5.4	4.7	3.7
Far East	1.7	3.3	6.8
Australia/New Zealand	5.4	6.2	6.4
Total	100.0	100.0	100.0

Source: Consultants' calculations based on Exhibit 7.

*percentages excluding North America are:

63%	54%	51%

Exhibit 9

Data Related to Protectionist Requirements (Tariffs, Local Contents, etc.) and Commencement of Manufacturing Abroad by Major U.S. Automotive Producers in Selected Nations

Date	Nation(s)	Data on Protection Requirements Imposted by Nations	Date of Manufacturing Investment or Expansion
1920s	Major European Nations	GM's Alfred Sloan notes mounting nationalistic pressures threaten export markets	U.K.(1925) Germany (1929) acquisitions by GM. In 1929 Ford begins backward integration into manufacturing
1923-1931	Australia	GM begins buying car bodies from local supplier (Holden). Australian government applies pressure for more local production.	Assembly started in 1926 by GM Australia PLty. In 1931, it is merged with Holden.
1959	Argentina	Minimum local content laws enacted	Backward integration from assembly into manufacturing
1959	Brazil	Minimum local content laws enacted	Same as above
1962	Mexico	Minimum local content laws enacted	Same as above
Early 1960s	South Africa	Local content laws enacted	GM builds engine plant in 1965; Ford builds engine plant 1964; Chrysler builds plant ($35 million) in 1967.
1971	Argentina	95% local content required	Major expansions in manufacturing
1971	Brazil	100% local content required	Same as above

Exhibit 10

Number of Foreign Subsidiaries Classified by Their Ownership and Principal Percentage of Activity When They Entered Their Multinational Systems

	% of ownership					
ACTIVITY	1-49 %	50 %	51-95 %	96-100%	UNKNOWN	TOTAL
MANUFAC	16	8	17	118	9	168
R & D-	0	0	0	0	0	0
SALES-	1	2	4	142	0	149
OTHER	0	0	0	23	3	26
UNKNOWN	0	0	0	22	7	29
-TOTAL-	17	10	21	305	19	372

Source: Harvard Multinational Project Database.

Exhibit 11

Number of Foreign Subsidiaries Classified by Their Percentage of Ownership and Principal Activity in 1976

	% of Ownership					
ACTIVITY	1-49 %	50 %	51-95 %	96-100%	UNKNOWN	TOTAL
MANUFAC	10	3	18	87	6	124
R & D-	0	0	0	0	0	0
SALES-	2	2	4	93	5	106
OTHER	0	1	2	33	7	43
UNKNOWN	1	0	0	12	86	99
-TOTAL-	13	6	24	225	104	372
EXITED	3	0	0	31	45	79

Source: Harvard Multinational Project Database.

EXHIBIT 12

Data for U.S. Automotive Multinationals Percentage of Activity in Each Ownership Category

A. At Entry

Activity	1-49%	50%	51-95%	96-100%	Total
Manufacturing	10%	5	11	74	100%
Sales	1%	1.5	2.5	95	100%

B. At Latest

	1-49%	50%	51-95%	96-100%	Total
Manufacturing	8.5%	2.5	15	74	100%
Sales	2.0	2.0	4	92	100%

Source: Consultants' calculations based on Exhibit 10 and 11.

Exhibit 13

Share of Minority versus Majority-Owned Subsidiaries Abroad by Three Major Automotive Producers

	Number and % of Minority-Owned Ventures (1-50%)		Number and % of Majority-Owned Ventures (51-100%	
At Entry	#	%	#	%
Manufacturing	24	15	135	85
Sales	3	2	146	98
In 1976				
Manufacturing	12	11	105	89
Sales	4	4	97	96

Note: calculations exclude "unknowns".

Source: Consultants' calculations from Exhibit 10 and 11.

CODE	COUNTRY	Percentage of Ownership 1-49 %	50 %	51-95 %	96-100%	UNKNOWN	TOTAL
1	INTERNATIONAL (	0	0	0	0	0	0
1	ZZ-(OLD: ASIA A	0	0	0	0	0	0
1	ZZ-(OLD: EUROPE	0	0	0	0	0	0
1	ZZ-(OLD: WESTER	0	0	0	0	0	0
101	AUSTRALIA	0	1	0	12	4	17
102	CANADA	0	0	2	17	25	44
103	NEW ZEALAND	0	0	0	4	0	4
104	RHODESIA	0	0	1	1	1	3
105	ST. PIERRE AND	0	0	0	0	0	0
106	SOUTH AFRICA	0	0	0	10	1	11
107	SOUTH WEST AFRI	0	0	0	0	0	0
108	UNITED STATES	0	0	0	15	9	24
109	ANTIGUA	0	0	0	0	0	0
200	CENTRAL AMERICA	0	0	0	0	0	0
200	ZZ-(OLD: BRITIS	0	0	0	0	0	0
202	BAHAMAS	0	0	0	0	0	0
203	BARBADOS	0	0	0	0	0	0
204	BERMUDA	0	0	0	2	0	2
205	BELIZE (BRITISH	0	0	0	0	0	0
205	BRITISH HONDURA	0	0	0	0	0	0
206	CANAL ZONE (PAN	0	0	0	0	0	0
207	COSTA RICA	0	0	0	0	0	0
208	CUBA	0	0	0	0	1	1
209	DOMINICA	0	0	0	0	0	0
210	DOMINICAN REPUB	0	0	0	0	0	0
211	EL SALVADOR	0	0	0	0	0	0
212	GRENADA	0	0	0	0	0	0
213	GUADELOPE	0	0	0	0	0	0
214	GUATEMALA	0	0	0	0	0	0
215	HAITI	0	0	0	0	0	0
216	HONDURAS	0	0	0	0	0	0
217	JAMAICA	0	0	0	0	1	1
218	MARTINIQUE	0	0	0	0	0	0
219	MEXICO	1	0	0	9	2	12

Exhibit 14

Number of Foreign Subsidiaries Classified By Percentage of Ownership and Geographic Location.

CODE	COUNTRY	1-49 %	50 %	51-95 %	96-100%	UNKNOWN	TOTAL
220	DUTCH (NETHERLA	0	0	0	2	0	2
220	DUTCH (NETHERLA	0	0	0	0	0	0
220	NETHERLANDS (DU	0	0	0	0	0	0
220	NETHERLANDS (DU	0	0	0	0	0	0
221	NICARAGUA	0	0	0	0	0	0
222	PANAMA	0	0	0	1	0	1
223	PUERTO RICO	0	0	0	0	0	0
224	ST. KITTS-NEVIS	0	0	0	0	0	0
225	ST. LUCIA	0	0	0	0	0	0
226	ST. VINCENT	0	0	0	0	0	0
227	TRINIDAD AND TO	0	0	0	0	0	0
228	VIRGIN ISLANDS	0	0	0	0	0	0
300	LATIN AMERICA (	0	0	0	0	0	0
301	BOLIVIA	0	0	0	0	0	0
302	CHILE	1	0	0	1	1	3
303	COLOMBIA	1	0	2	2	1	6
304	ECUADOR	0	0	0	0	0	0
305	PERU	0	0	1	1	2	4
306	ARGENTINA	1	0	0	8	1	10
307	BRAZIL	0	0	5	8	0	13
308	FRENCH GUIANA	0	0	0	0	0	0
309	BRITISH GUYANA	0	0	0	0	0	0
309	BRITISH GUYANA	0	0	0	0	0	0
309	GUYANA (BRITISH	0	0	0	0	0	0
309	GUYANA (BRITISH	0	0	0	0	0	0
310	PARAGUAY	0	0	0	0	0	0
311	DUICH GUIANA (S	0	0	0	0	0	0
311	SURINAM (DUTCH	0	0	0	0	0	0
312	URUGUAY	1	0	0	2	0	3
313	VENEZUELA	0	0	0	6	1	7
401	BELGIUM	0	0	1	4	0	5
402	FRANCE	0	0	1	10	11	22
403	GERMANY (WEST,	0	0	0	13	3	16
404	ITALY	0	0	0	10	1	11
405	LUXEMBOURG	0	0	0	1	0	1

Exhibit 14 continued

CODE	COUNTRY	1-49 %	50 %	51-95 %	96-100%	UNKNOWN	TOTAL
800	ZZ-(OLD: CENTRA	0	0	0	0	0	0
800	ZZ-(OLD: EAST A	0	0	0	0	0	0
800	ZZ-(OLD: NORTH	0	0	0	0	0	0
800	ZZ-(OLD: WEST A	0	0	0	0	0	0
801	AFARS AND ISSAS	0	0	0	0	0	0
801	FRENCH SOMALILA	0	0	0	0	0	0
802	ANGOLA	0	0	0	0	0	0
803	BOTSWANA	0	0	0	0	0	0
804	BURUNDI	0	0	0	0	0	0
805	CAMEROON	0	0	0	0	0	0
806	CAPE VERDE ISLA	0	0	0	0	0	0
807	CENTRAL AFRICAN	0	0	0	0	0	0
808	COMORO ISLANDS	0	0	0	0	0	0
809	CONGO, FRENCH	0	0	0	0	0	0
809	DEM. CONGO (BRA	0	0	0	0	0	0
810	DAHOMEY	0	0	0	0	0	0
811	EQUATORIAL GUIN	0	0	0	0	0	0
812	ETHIOPIA	0	0	0	0	0	0
813	GABON	0	0	0	0	0	0
814	GAMBIA	0	0	0	0	0	0
815	GHANA	0	0	0	0	0	0
816	GUINEA	0	0	0	0	0	0
817	IVORY COAST	0	0	0	0	0	0
818	KENYA	0	0	0	1	0	1
819	LESOTHO	0	0	0	0	0	0
820	LIBERIA	0	0	0	0	0	0
821	MALAGASY REPUBL	0	0	0	0	0	0
822	MALAWI	0	0	0	0	0	0
823	MAURITIUS	0	0	0	0	0	0
824	MOZAMBIQUE	0	0	0	1	0	1
825	NIGERIA	0	0	0	0	0	0
826	PORTUGUESE GUIN	0	0	0	0	0	0
827	REUNION	0	0	0	0	0	0
828	RUANDA	0	0	0	0	0	0
829	SAO TOME AND PR	0	0	0	0	0	0

Exhibit 14 continued

CODE	COUNTRY	1-49 %	50 %	51-95 %	96-100%	UNKNOWN	TOTAL
830	SENEGAL	0	0	0	0	0	0
831	SIERRA LEONE	0	0	0	0	0	0
832	SWAZILAND	0	0	0	0	0	0
833	TANZANIA	0	0	0	0	0	0
834	TOGO	0	0	0	0	0	0
835	UGANDA	0	0	0	0	0	0
836	UPPER VOLTA	0	0	0	0	0	0
837	ZAMBIA	0	0	0	0	0	0
838	CONGO, BELGIAN	0	0	0	2	0	2
838	REP. CONGO (ZAI	0	0	0	0	0	0
838	ZAIRE (REP. OR	0	0	0	0	0	0
839	MADGASCAR	0	0	0	0	0	0
901	AMERICAN SAMOA	0	0	0	0	0	0
902	BRITISH SOLOMON	0	0	0	0	0	0
903	BRUNEI	0	0	0	0	0	0
904	BURMA	0	0	0	0	0	0
905	CAMBODIA	0	0	0	0	0	0
906	CHINA (MAINLAND	0	0	0	0	0	0
907	CHINA (TAIWAN)	0	0	1	0	1	2
907	TAIWAN	0	0	0	0	0	0
908	FIJI	0	0	0	0	0	0
909	FRENCH POLYNESI	0	0	0	0	0	0
910	GUAM	0	0	0	0	0	0
911	HONG KONG	0	0	0	0	0	0
912	INDONESIA (2ND	0	0	0	0	2	2
912	INDONESIA (1ST	0	0	0	0	0	0
913	JAPAN	3	2	0	2	2	9
914	KOREA (NORTH)	0	0	0	0	0	0
915	KOREA (SOUTH)	0	1	0	0	0	1
916	LAOS	0	0	0	0	0	0
917	MACAU	0	0	0	0	0	0
918	MALAYSIA	0	0	0	1	0	1
919	MONGOLIA	0	0	0	0	0	0
920	NEW CALEDONIA	0	0	0	0	0	0
921	NEW GUINEA AND	0	0	0	0	0	0

Exhibit 14
continued

CODE	COUNTRY	1-49 %	50 %	51-95 %	96-100%	UNKNOWN	TOTAL
922	NEW HEBRIDES	0	0	0	0	0	0
923	PHILLIPINES	0	0	1	3	0	4
924	PORTUGUESE TIMO	0	0	0	0	0	0
925	RYUKYU ISLANDS	0	0	0	0	0	0
926	SINGAPORE	0	0	0	3	1	4
927	THAILAND	1	0	0	2	0	3
928	TONGA	0	0	0	0	0	0
929	VIETNAM (NORTH)	0	0	0	0	0	0
930	VIETNAM (SOUTH)	0	0	0	0	0	0
931	WESTERN SAMOA	0	0	0	0	0	0

Exhibit 14 continued

EXHIBIT 15

Latest Ownership of Subsidiary by Area of Incorporation
Number of Subsidiaries

Area	1-49%	50%	51-95%	96-100%	Unk.	Total
			Number of Subsidiaries			
North America	0	0	2	32	34	68
Latin America	5	0	8	42	10	65
Western Europe	1	2	9	105	39	156
Eastern Europe	0	0	0	0	3	3
Mid East	2	0	2	3	2	9
Near East	1	0	0	0	3	4
Africa	0	0	1	15	2	18
Far East	4	3	2	11	6	26
Australia/New Zealand	0	1	0	16	4	21
Total	13	6	24	224	103	370
% Total	4	2	6	61	27	

Source: Exhibit 14.

EXHIBIT 16

Latest Ownership of Subsidiary by Area of Incorporation
Ownership Percentage by Area[1]

Area	1-49%	50%	51-95%	96-100%	Total
North America	0	0	5.9	94.1	100.0
Latin America	9.1	0	14.5	76.4	100.0
Western Europe	0.9	1.7	7.7	89.7	100.0
Eastern Europe	0	0	0	0	0
Mid East	28.6	0	28.6	42.8	100.0
Near East	100.0	0	0	0	100.0
Africa	0	0	6.3	93.7	100.0
Far East	20.0	15.0	10.0	55.0	100.0
Australia/New Zealand	0	5.9	0	94.1	100.0

[1]Unknowns excluded.

Source: Exhibit 15.

EXHIBIT 17

Data for U.S. Automotive Multinationals
Latest Ownership of Subsidiary by Country of Incorporation
Ranking by Country[1]

Country	1-49%	50%	51-95%	96-100%	Unk.	Total	% Total
	Number of Subsidiaries						
United Kingdom	1	1	1	33	14	50	24
France	0	0	1	10	11	22	11
Australia	0	1	0	12	4	17	8
West Germany	0	0	0	13	3	16	8
Brazil	0	0	5	8	0	13	6
Mexico	1	0	0	9	2	12	6
Italy	0	0	0	10	1	11	5
South Africa	0	0	0	10	1	11	5
Argentina	1	0	0	8	1	10	5
Japan	3	3	0	2	2	9	4
Spain	0	1	1	4	2	8	4
Switzerland	0	0	0	7	1	8	4
Venezuela	0	0	0	6	1	7	4
Columbia	1	0	2	2	1	6	3
Sweden	0	0	1	3	2	6	3
Total	7	5	11	137	46	206	100

[1]Based on 15 countries with largest number of subsidiaries (excluding the U.S. & Canada).

Source: Consultants' calculations based on Exhibit 14.

Exhibit 18

Number of Foreign Subsidiaries Classified by Number of Employees and Principal Activity in 1876

The Number of Employees

ACTIVITY	0-100	101-500	501-1000	1001-5000	5001-10000	>10000	UNKNOWN	TOTAL
MANUFAC	7	9	14	30	5	16	43	124
R & D	0	0	0	0	0	0	0	0
SALES	31	17	3	0	0	0	55	106
OTHER	4	1	1	1	0	0	36	43
UNKNOWN	0	0	0	1	0	0	98	99
TOTAL	42	27	18	32	5	16	232	372

Source: Harvard Multinational Enterprise Project.

Exhibit 19

DATA FOR U.S. AUTOMOTIVE MULTINATIONALS
FINANCIAL STATISTICS AT LATEST
(1976) by Activity

ACTIVITY:	MANUFAC	-R & D-	-SALES-	OTHER	UNKNOWN	-TOTAL-	-EXITED-
The Number of Foreign Subsidiares							
-SALES-							
< $1 MILL	3	0	16	5	0	24	0
$1M-$10M	16	0	11	1	0	28	1
$10M-$25M	14	0	7	0	0	21	0
$25M-$100M	18	0	17	1	0	36	0
> $100MILL	43	0	7	2	1	53	1
UNKNOWN	30	0	48	34	98	210	77
TOTAL	124	0	106	43	99	372	0
EXITED	12	0	10	2	55	0	79
-ASSETS-							
< $1 MILL	4	0	15	10	0	29	2
$1M-$10M	21	0	19	1	0	41	0
$10M-$25M	18	0	11	2	0	31	0
$25M-$100M	22	0	12	0	0	34	0
> $100MILL	27	0	1	2	1	31	1
UNKNOWN	32	0	48	28	98	206	76
TOTAL	124	0	106	43	99	372	0
EXITED	12	0	10	2	55	0	79
-EQUITY-							
< $1 MILL	22	0	32	12	0	66	2
$1M-$10M	30	0	27	2	0	59	1
$10M-$25M	13	0	8	2	1	24	1
$25M-$100M	12	0	1	1	0	14	0
> $100MILL	12	0	0	2	0	14	0
UNKNOWN	35	0	38	24	98	195	75
TOTAL	124	0	106	43	99	372	0
EXITED	12	0	10	2	55	0	79

Source: Harvard Multinational Enteprise Databank.

Exhibit 19
Summary Financial
Statistics for 1976.

CODE	COUNTRY	Sales Category LT $1M	$1M-$10M	$10M-$25M	$25M-$100M	GT $100M	UNKNOWN	TOTAL
1	INTERNATIONAL (	0	0	0	0	0	0	0
1	ZZ-(OLD: ASIA A	0	0	0	0	0	0	0
1	ZZ-(OLD: EUROPE	0	0	0	0	0	0	0
1	ZZ-(OLD: WESTER	0	0	0	0	0	0	0
101	AUSTRALIA	1	2	1	0	3	10	17
102	CANADA	2	3	2	1	5	31	44
103	NEW ZEALAND	0	0	0	1	1	2	4
104	RHODESIA	0	0	0	0	0	3	3
105	ST. PIERRE AND	0	0	0	0	0	0	0
106	SOUTH AFRICA	0	0	0	1	2	8	11
107	SOUTH WEST AFRI	0	0	0	0	0	0	0
108	UNITED STATES	0	0	1	0	2	21	24
109	ANTIGUA	0	0	0	0	0	0	0
200	CENTRAL AMERICA	0	0	0	0	0	0	0
200	ZZ-(OLD: BRITIS	0	0	0	0	0	0	0
202	BAHAMAS	0	0	0	0	0	0	0
203	BARBADOS	0	0	0	0	0	0	0
204	BERMUDA	0	0	0	0	0	2	2
205	BELIZE (BRITISH	0	0	0	0	0	0	0
205	BRITISH HONDURA	0	0	0	0	0	0	0
206	CANAL ZONE (PAN	0	0	0	0	0	0	0
207	COSTA RICA	0	0	0	0	0	0	0
208	CUBA	0	0	0	0	0	1	1
209	DOMINICA	0	0	0	0	0	0	0
210	DOMINICAN REPUB	0	0	0	0	0	0	0
211	EL SALVADOR	0	0	0	0	0	0	0
212	GRENADA	0	0	0	0	0	0	0
213	GUADELOPE	0	0	0	0	0	0	0
214	GUATEMALA	0	0	0	0	0	0	0
215	HAITI	0	0	0	0	0	0	0
216	HONDURAS	0	0	0	0	0	0	0
217	JAMAICA	0	0	0	0	0	1	1
218	MARTINIQUE	0	0	0	0	0	0	0
219	MEXICO	2	1	2	0	3	4	12

Exhibit 20

Number of Foreign Subsidiaries Classified by Sales Categories and Geographic Location in 1976

Exhibit 20

continued

CODE	COUNTRY	Sales Category						
		LT $1M	$1M-$10M	$10M-$25M	$25M-$100M	GT $100M	UNKNOWN	TOTAL
220	DUTCH (NETHERLA	1	1	0	0	0	0	2
220	DUTCH (NETHERLA	0	0	0	0	0	0	0
220	NETHERLANDS (DU	0	0	0	0	0	0	0
220	NETHERLANDS (DU	0	0	0	0	0	0	0
221	NICARAGUA	0	0	0	0	0	0	0
222	PANAMA	1	0	0	0	0	0	1
223	PUERTO RICO	0	0	0	0	0	0	0
224	ST. KITTS-NEVIS	0	0	0	0	0	0	0
225	ST. LUCIA	0	0	0	0	0	0	0
226	ST. VINCENT	0	0	0	0	0	0	0
227	TRINIDAD AND TO	0	0	0	0	0	0	0
228	VIRGIN ISLANDS	0	0	0	0	0	0	0
300	LATIN AMERICA (	0	0	0	0	0	0	0
301	BOLIVIA	0	0	0	0	0	0	0
302	CHILE	0	1	0	0	0	2	3
303	COLOMBIA	1	1	0	3	0	1	6
304	ECUADOR	0	0	0	0	0	0	0
305	PERU	0	0	0	1	0	3	4
306	ARGENTINA	1	1	1	0	3	4	10
307	BRAZIL	1	0	1	1	3	7	13
308	FRENCH GUIANA	0	0	0	0	0	0	0
309	BRITISH GUYANA	0	0	0	0	0	0	0
309	BRITISH GUYANA	0	0	0	0	0	0	0
309	GUYANA (BRITISH	0	0	0	0	0	0	0
309	GUYANA (BRITISH	0	0	0	0	0	0	0
310	PARAGUAY	0	0	0	0	0	0	0
311	DUTCH GUIANA (S	0	0	0	0	0	0	0
311	SURINAM (DUTCH	0	0	0	0	0	0	0
312	URUGUAY	1	1	0	0	0	1	3
313	VENEZUELA	0	2	0	0	3	2	7
401	BELGIUM	0	1	0	0	3	1	5
402	FRANCE	1	2	0	2	6	11	22
403	GERMANY (WEST,	2	0	1	0	2	11	16
404	ITALY	3	0	0	1	1	6	11
405	LUXEMBOURG	0	0	0	0	0	1	1

Exhibit 20

continued

CODE	COUNTRY	Sales Category LT $1M	$1M-$10M	$10M-$25M	$25M-$100M	GT $100M	UNKNOWN	TOTAL
406	NETHERLANDS	0	0	0	0	2	2	4
407	DENMARK	0	0	2	2	0	2	6
408	IRELAND	0	0	3	1	0	2	6
409	UNITED KINGDOM	2	2	1	5	5	35	50
410	AUSTRIA	1	0	0	2	0	1	4
411	CYPRUS	0	0	0	0	0	0	0
412	FINLAND	0	0	0	2	0	0	2
413	GREECE	0	0	0	0	0	2	2
414	ICELAND	0	0	0	0	0	0	0
415	LIECHTENSTEIN	0	0	0	0	0	0	0
416	MALTA	0	0	0	0	0	0	0
417	MONACO	0	0	0	0	0	0	0
418	NORWAY	0	0	1	2	0	0	3
419	PORTUGAL	0	0	0	1	0	1	2
420	SPAIN	0	2	1	0	1	4	8
421	SWEDEN	0	0	0	0	2	4	6
422	SWITZERLAND	1	0	0	1	3	3	8
501	ALBANIA	0	0	0	0	0	0	0
502	ANDORRA	0	0	0	0	0	0	0
503	BULGARIA	0	0	0	0	0	0	0
504	CZECHOSLOVAKIA	0	0	0	0	0	0	0
505	GERMANY (EAST)	0	0	0	0	0	0	0
506	GIBRALTAR	0	0	0	0	0	0	0
507	HUNGARY	0	0	0	0	0	1	1
508	POLAND	0	0	0	0	0	1	1
509	RUMANIA	0	0	0	0	0	1	1
510	SAN MARINO	0	0	0	0	0	0	0
511	USSR (RUSSIA)	0	0	0	0	0	0	0
512	YUGOSLAVIA	0	0	0	0	0	0	0
601	ALGERIA	0	1	0	0	0	1	2
602	IRAN	0	0	0	1	0	0	1
603	IRAQ	0	0	0	0	0	0	0
604	KUWAIT	0	0	0	0	0	0	0
605	LIBYA	0	0	0	0	0	0	0
606	QATAR	0	0	0	0	0	0	0

FINANCE CATEGORY OF SUBSIDIARY BY COUNTRY OF INCORPORATION

CODE	COUNTRY	Sales Category LT $1M	$1M-$10M	$10M-$25M	$25M-$100M	GT $100M	UNKNOWN	TOTAL
607	SAUDI ARABIA	0	0	0	0	0	1	1
608	SYRIA	0	0	0	0	0	0	0
609	TRUCIAL STATES	0	0	0	0	0	0	0
610	BAHRAIN	0	0	0	0	0	0	0
611	CHAD	0	0	0	0	0	0	0
612	DHOFAR	0	0	0	0	0	0	0
613	DUBAI	0	0	0	0	0	0	0
614	ISRAEL	0	0	0	0	0	0	0
615	JORDAN	0	0	0	0	0	0	0
616	LEBANON	0	0	0	0	0	0	0
617	MALI	0	0	0	0	0	0	0
618	MAURITIANA	0	0	0	0	0	0	0
619	MOROCCO	0	0	1	0	0	0	1
620	MUSCAT AND OMAN	0	0	0	0	0	0	0
621	NIGER	0	0	0	0	0	0	0
622	SOMALI REPUBLIC	0	0	0	0	0	0	0
623	ADEN (SOUTHERN	0	0	0	0	0	0	0
623	SOUTHERN YEMEN	0	0	0	0	0	0	0
624	SPANISH NORTH A	0	0	0	0	0	0	0
625	SUDAN	0	0	0	0	0	0	0
626	TUNISIA	0	1	0	0	0	0	1
627	TURKEY	0	0	0	1	0	0	1
628	EGYPT (UNITED A	0	0	0	0	0	2	2
628	UNITED ARAB REP	0	0	0	0	0	0	0
629	YEMEN	0	0	0	0	0	0	0
701	AFGHANISTAN	0	0	0	0	0	0	0
702	CEYLON	0	0	0	0	0	0	0
703	INDIA	0	1	0	0	0	2	3
704	MALDIIVE ISLAND	0	0	0	0	0	0	0
705	NEPAL	0	0	0	0	0	0	0
706	PAKISTAN	0	0	0	0	0	1	1
707	SEYCHELLES	0	0	0	0	0	0	0
708	SIKKIM	0	0	0	0	0	0	0
709	BANGLADESH	0	0	0	0	0	0	0
800	AFRICA (N.F.S.)	0	0	0	0	0	0	0

Exhibit 20
continued

FINANCE CATEGORY OF SUBSIDIARY BY COUNTRY OF INCORPORATION

CODE	COUNTRY	Sales Category LT $1M	$1M-$10M	$10M-$25M	$25M-$100M	GT $100M	UNKNOWN	TOTAL
800	ZZ-(OLD; CENTRA	0	0	0	0	0	0	0
800	ZZ-(OLD; EAST A	0	0	0	0	0	0	0
800	ZZ-(OLD; NORTH	0	0	0	0	0	0	0
800	ZZ-(OLD; WEST A	0	0	0	0	0	0	0
801	AFARS AND ISSAS	0	0	0	0	0	0	0
801	FRENCH SOMALILA	0	0	0	0	0	0	0
802	ANGOLA	0	0	0	0	0	0	0
803	BOTSWANA	0	0	0	0	0	0	0
804	BURUNDI	0	0	0	0	0	0	0
805	CAMEROON	0	0	0	0	0	0	0
806	CAPE VERDE ISLA	0	0	0	0	0	0	0
807	CENTRAL AFRICAN	0	0	0	0	0	0	0
808	COMORO ISLANDS	0	0	0	0	0	0	0
809	CONGO, FRENCH	0	0	0	0	0	0	0
809	DEM. CONGO (BRA	0	0	0	0	0	0	0
810	DAHOMEY	0	0	0	0	0	0	0
811	EQUATORIAL GUIN	0	0	0	0	0	0	0
812	ETHIOPIA	0	0	0	0	0	0	0
813	GABON	0	0	0	0	0	0	0
814	GAMBIA	0	0	0	0	0	0	0
815	GHANA	0	0	0	0	0	0	0
816	GUINEA	0	0	0	0	0	0	0
817	IVORY COAST	0	0	0	0	0	0	0
818	KENYA	0	0	0	0	0	1	1
819	LESOTHO	0	0	0	0	0	0	0
820	LIBERIA	0	0	0	0	0	0	0
821	MALAGASY REPUBL	0	0	0	0	0	0	0
822	MALAWI	0	0	0	0	0	0	0
823	MAURITIUS	0	0	0	0	0	0	0
824	MOZAMBIQUE	0	0	0	1	0	0	1
825	NIGERIA	0	0	0	0	0	0	0
826	PORTUGUESE GUIN	0	0	0	0	0	0	0
827	REUNION	0	0	0	0	0	0	0
828	RUANDA	0	0	0	0	0	0	0
829	SAO TOME AND PR	0	0	0	0	0	0	0

Exhibit 20
(continued)

FINANCE CATEGORY OF SUBSIDIARY BY COUNTRY OF INCORPORATION

CODE	COUNTRY	Sales Category LT $1M	$1M-$10M	$10M-$25M	$25M-$100M	GT $100M	UNKNOWN	TOTAL
830	SENEGAL	0	0	0	0	0	0	0
831	SIERRA LEONE	0	0	0	0	0	0	0
832	SWAZILAND	0	0	0	0	0	0	0
833	TANZANIA	0	0	0	0	0	0	0
834	TOGO	0	0	0	0	0	0	0
835	UGANDA	0	0	0	0	0	0	0
836	UPPER VOLTA	0	0	0	0	0	0	0
837	ZAMBIA	0	0	0	0	0	0	0
838	CONGO, BELGIAN	0	1	0	0	0	1	2
838	REP. CONGO (ZAI	0	0	0	0	0	0	0
838	ZAIRE (REP. OR	0	0	0	0	0	0	0
839	MADGASCAR	0	0	0	0	0	0	0
901	AMERICAN SAMOA	0	0	0	0	0	0	0
902	BRITISH SOLOMON	0	0	0	0	0	0	0
903	BRUNEI	0	0	0	0	0	0	0
904	BURMA	0	0	0	0	0	0	0
905	CAMBODIA	0	0	0	0	0	0	0
906	CHINA (MAINLAND	0	0	0	0	0	0	0
907	CHINA (TAIWAN)	0	0	1	0	0	1	2
907	TAIWAN	0	0	0	0	0	0	0
908	FIJI	0	0	0	0	0	0	0
909	FRENCH POLYNESI	0	0	0	0	0	0	0
910	GUAM	0	0	0	0	0	0	0
911	HONG KONG	0	0	0	0	0	0	0
912	INDONESIA (2ND	0	0	0	0	0	2	2
912	INDONESIA (1ST	0	0	0	0	0	0	0
913	JAPAN	2	0	0	3	2	2	9
914	KOREA (NORTH)	0	0	0	0	0	0	0
915	KOREA (SOUTH)	0	0	0	1	0	0	1
916	LAOS	0	0	0	0	0	0	0
917	MACAU	0	0	0	0	0	0	0
918	MALAYSIA	0	0	1	0	0	0	1
919	MONGOLIA	0	0	0	0	0	0	0
920	NEW CALEDONIA	0	0	0	0	0	0	0
921	NEW GUINEA AND	0	0	0	0	0	0	0

Exhibit 20
continued

FINANCE CATEGORY OF SUBSIDIARY BY COUNTRY OF INCORPORATION

CODE	COUNTRY	Sales Category LT $1M	$1M-$10M	$10M-$25M	$25M-$100M	GT $100M	UNKNOWN	TOTAL
922	NEW HEBRIDES	0	0	0	0	0	0	0
923	PHILLIPINES	1	1	1	1	0	0	4
924	PORTUGUESE TIMO	0	0	0	0	0	0	0
925	RYUKYU ISLANDS	0	0	0	0	0	0	0
926	SINGAPORE	0	0	0	1	0	3	4
927	THAILAND	0	3	0	0	0	0	3
928	TONGA	0	0	0	0	0	0	0
929	VIETNAM (NORTH)	0	0	0	0	0	0	0
930	VIETNAM (SOUTH)	0	0	0	0	0	0	0
931	WESTERN SAMOA	0	0	0	0	0	0	0

Exhibit 20
continued

Source: Harvard Multinational Enterprise Databank.

Exhibit 21

Number of Foreign Subsidiaries Classified by Sales Category and by Area of Incorporation in 1976

Area	Lt $1m	$1m-10m	$10m-25m	$25m-100m	Gt $100m	Unk.	Total
North America	2	3	3	1	7	52	68
Latin America	8	8	4	5	12	28	65
Western Europe	10	7	9	19	25	86	156
Eastern Europe	0	0	0	0	0	3	3
Mid East	0	2	1	2	0	4	9
Near East	0	1	0	0	0	3	4
Africa	0	1	0	2	2	13	18
Far East	3	4	3	6	2	8	26
Australia/New Zealand	1	2	1	1	4	12	21

Source: Consultants' calculation based on Exhibit 20.

Exhibit 22

Percentage of Foreign Subsidiaries by Sales Category and by Area of Incorporation in 1976

Area	Percentages(1)					
	Lt $1m	$1m-10m	$10m-25m	$25m-100m	Gt $100m	Total
North America	12.5	18.8	18.8	6.2	43.7	100.0
Latin America	21.6	21.6	10.8	13.5	32.5	100.0
Western Europe	14.3	10.0	12.9	27.1	35.7	100.0
Eastern Europe	0	0	0	0	0	0
Mid East	0	40.0	20.0	40.0	0	100.0
Near East	0	100.0	0	0	0	100.0
Africa	0	20.0	0	40.0	40.0	100.0
Far East	16.7	22.2	16.7	33.3	11.1	100.0
Australia/New Zealand	11.1	22.2	11.1	11.1	44.5	100.0

[1]Excludes unknown category.

Source: consultants' calculation based on Exhibit 20.

Exhibit 23

Number of Foreign Subsidiaries by Area of Incorporation as Percentage of Total Number of Subsidiaries within Each Sales Category in 1976

Area	Lt $1	$1-10m	$10m-25m	$25m-100m	Gt $100m
North America	8.3%	10.7%	14.3%	2.8%	13.5%
Latin America	33.3	28.6	19.0	13.9	23.1
Western Europe	41.7	25.0	42.8	52.8	48.1
Eastern Europe	0	0	0	0	0
Mid East	0	7.1	4.8	5.5	0
Near East	0	3.6	0	0	0
Africa	0	3.6	0	5.5	3.8
Far East	12.5	14.3	14.3	16.7	3.8
Australia/New Zealand	4.2	7.1	4.8	2.8	7.7
	100.0%	100.0%	100.0%	100.0%	

Source: Consultants' calculations based on Exhibit 20.

Exhibit 24

Ranking[1] of Number of Foreign Subsidiaries by Country of Incorporation and Sales Categories in 1976.

Area	Lt $1m	$1m-10m	$10m-25m	$25m-100m	Gt $100m	Unk.	Total
United Kingdom	2	2	1	5	5	35	50
France	1	2	0	2	6	11	22
Australia	1	2	1	0	3	10	17
West Germany	2	0	1	0	2	11	16
Brazil	1	0	1	1	3	7	13
Mexico	2	1	2	0	3	4	12
Italy	3	0	0	1	1	6	11
South Africa	0	0	0	1	2	8	11
Argentina	1	1	1	0	3	4	10
Japan	2	0	0	3	2	2	9
Spain	0	2	1	0	1	4	8
Switzerland	1	0	0	1	3	3	8
Venezuela	0	2	0	0	3	2	7
Columbia	1	1	0	3	0	1	6
Sweden	0	0	0	0	2	4	6

[1]Includes 15 countries with largest number of total subsidiaries, 1976 (excluding U.S. & Canada).

Source: Consultants' calculation based on Exhibit 20.

Exhibit 25

Concentration of Foreign Subsidiaries and by Country of Incorporation and Sales Categories in 1976.

Sales Categories	Ratio of Subsid. in 5 Largest Countries to Total Subsid.[1]	Ratio of Subsid. in 10 Largest Countries to Total Subsid.[2]	Ratio of Subsid. in 15 Largest Countries to Total Subsid.[3]
Lt. $1m	.318 (7/22)	.682 (15/22)	.773 (17/22)
$1m-10m	.240 (6/25)	.320 (8/25)	.520 (13/25)
$10m-25m	.222 (4/18)	.389 (7/18)	.320 (8/25)
$25m-100m	.229 (8/35)	.371 (13/35)	.486 (17/35)
Gt. $100m	.422 (19/45)	.667 (30/45)	.867 (39/45)
Unk.	.471 (74/157)	.624 (98/157)	.713 (112/157)
Total	.391 (118/302)	;566 (171/302)	.682 (206/302)

[1]Large in the Sense of having the largest number of subsidiaries; includes United Kingdom, France, Australia, West Germany & Brazil

[2]Includes Mexico, Italy, South Africa, Argentina and Japan in addition to the above.

[3]Includes Spain, Switzerland, Venezuela, Columbia & Sweden in addition to the above.

Source: Consultants' calculations based on Exhibit 20.

FINANCE CATEGORY OF SUBSIDIARY BY COUNTRY OF INCORPORATION

Exhibit 26

CODE	COUNTRY	FINANCE CATEGORY (Assets) LT $1M	$1M-$10M	$10M-$25M	$25M-$100M	GT $100M	UNKNOWN	TOTAL
1	INTERNATIONAL (	0	0	0	0	0	0	0
1	ZZ-(OLD: ASIA A	0	0	0	0	0	0	0
1	ZZ-(OLD: EUROPE	0	0	0	0	0	0	0
1	ZZ-(OLD: WESTER	0	0	0	0	0	0	0
101	AUSTRALIA	0	3	1	0	3	10	17
102	CANADA	3	4	0	2	4	31	44
103	NEW ZEALAND	0	0	1	1	0	2	4
104	RHODESIA	0	0	0	0	0	3	3
105	ST. PIERRE AND	0	0	0	0	0	0	0
106	SOUTH AFRICA	0	0	1	1	1	8	11
107	SOUTH WEST AFRI	0	0	0	0	0	0	0
108	UNITED STATES	0	0	0	1	2	21	24
109	ANTIGUA	0	0	0	0	0	0	0
200	CENTRAL AMERICA	0	0	0	0	0	0	0
200	ZZ-(OLD: BRITIS	0	0	0	0	0	0	0
202	BAHAMAS	0	0	0	0	0	0	0
203	BARBADOS	0	0	0	0	0	0	0
204	BERMUDA	0	0	0	0	0	2	2
205	BELIZE (BRITISH	0	0	0	0	0	0	0
205	BRITISH HONDURA	0	0	0	0	0	0	0
206	CANAL ZONE (PAN	0	0	0	0	0	0	0
207	COSTA RICA	0	0	0	0	0	0	0
208	CUBA	0	0	0	0	0	1	1
209	DOMINICA	0	0	0	0	0	0	0
210	DOMINICAN REPUB	0	0	0	0	0	0	0
211	EL SALVADOR	0	0	0	0	0	0	0
212	GRENADA	0	0	0	0	0	0	0
213	GUADELOPE	0	0	0	0	0	0	0
214	GUATEMALA	0	0	0	0	0	0	0
215	HAITI	0	0	0	0	0	0	0
216	HONDURAS	0	0	0	0	0	0	0
217	JAMAICA	0	0	0	0	0	1	1
218	MARTINIQUE	0	0	0	0	0	0	0
219	MEXICO	2	0	2	3	1	4	12

Exhibit 26

Number of Foreign Subsidiaries Classified by Geographic Location and Size of Their Assets.

FINANCE CATEGORY OF SUBSIDIARY BY COUNTRY OF INCORPORATION

Exhibit 26 (continued)

CODE	COUNTRY	(Assets) FINANCE CATEGORY LT $1M	$1M-$10M	$10M-$25M	$25M-$100M	GT $100M	UNKNOWN	TOTAL
220	DUTCH (NETHERLA	0	0	0	1	1	0	2
220	DUTCH (NETHERLA	0	0	0	0	0	0	0
220	NETHERLANDS (DU	0	0	0	0	0	0	0
220	NETHERLANDS (DU	0	0	0	0	0	0	0
221	NICARAGUA	0	0	0	0	0	0	0
222	PANAMA	1	0	0	0	0	0	1
223	PUERTO RICO	0	0	0	0	0	0	0
224	ST. KITTS-NEVIS	0	0	0	0	0	0	0
225	ST. LUCIA	0	0	0	0	0	0	0
226	ST. VINCENT	0	0	0	0	0	0	0
227	TRINIDAD AND TO	0	0	0	0	0	0	0
228	VIRGIN ISLANDS	0	0	0	0	0	0	0
300	LATIN AMERICA (	0	0	0	0	0	0	0
301	BOLIVIA	0	0	0	0	0	0	0
302	CHILE	0	1	0	0	0	2	3
303	COLOMBIA	1	1	0	3	0	1	6
304	ECUADOR	0	0	0	0	0	0	0
305	PERU	0	0	1	0	0	3	4
306	ARGENTINA	2	0	2	0	3	3	10
307	BRAZIL	1	0	1	1	3	7	13
308	FRENCH GUYANA	0	0	0	0	0	0	0
309	BRITISH GUYANA	0	0	0	0	0	0	0
309	BRITISH GUYANA	0	0	0	0	0	0	0
309	GUYANA (BRITISH	0	0	0	0	0	0	0
309	GUYANA (BRITISH	0	0	0	0	0	0	0
310	PARAGUAY	0	0	0	0	0	0	0
311	DUTCH GUIANA (S	0	0	0	0	0	0	0
311	SURINAM (DUTCH	0	0	0	0	0	0	0
312	URUGUAY	1	1	0	0	0	1	3
313	VENEZUELA	1	2	0	3	0	1	7
401	BELGIUM	0	1	1	1	1	1	5
402	FRANCE	0	2	1	6	1	12	22
403	GERMANY (WEST,	2	0	1	0	2	11	16
404	ITALY	2	1	1	1	0	6	11
405	LUXEMBOURG	0	0	0	0	0	1	1

Exhibit 26 continued

FINANCE CATEGORY OF SUBSIDIARY BY COUNTRY OF INCORPORATION

Exhibit 26 (continued)

CODE	COUNTRY	(Assets) FINANCE CATEGORY LT $1M	$1M-$10M	$10M-$25M	$25M-$100M	GT $100M	UNKNOWN	TOTAL
406	NETHERLANDS	0	1	0	1	0	2	4
407	DENMARK	0	1	2	1	0	2	6
408	IRELAND	0	3	1	0	0	2	6
409	UNITED KINGDOM	7	2	2	4	4	31	50
410	AUSTRIA	1	1	1	0	0	1	4
411	CYPRUS	0	0	0	0	0	0	0
412	FINLAND	0	1	0	1	0	0	2
413	GREECE	0	0	0	0	0	2	2
414	ICELAND	0	0	0	0	0	0	0
415	LIECHTENSTEIN	0	0	0	0	0	0	0
416	MALTA	0	0	0	0	0	0	0
417	MONACO	0	0	0	0	0	0	0
418	NORWAY	0	1	2	0	0	0	3
419	PORTUGAL	0	0	1	0	0	1	2
420	SPAIN	0	2	1	0	1	4	8
421	SWEDEN	1	0	0	2	0	3	6
422	SWITZERLAND	0	1	3	0	1	3	8
501	ALBANIA	0	0	0	0	0	0	0
502	ANDORRA	0	0	0	0	0	0	0
503	BULGARIA	0	0	0	0	0	0	0
504	CZECHOSLOVAKIA	0	0	0	0	0	0	0
505	GERMANY (EAST)	0	0	0	0	0	0	0
506	GIBRALTAR	0	0	0	0	0	0	0
507	HUNGARY	0	0	0	0	0	1	1
508	POLAND	0	0	0	0	0	1	1
509	RUMANIA	0	0	0	0	0	1	1
510	SAN MARINO	0	0	0	0	0	0	0
511	USSR (RUSSIA)	0	0	0	0	0	0	0
512	YUGOSLAVIA	0	0	0	0	0	0	0
601	ALGERIA	0	1	0	0	0	1	2
602	IRAN	0	0	0	0	0	1	1
603	IRAQ	0	0	0	0	0	0	0
604	KUWAIT	0	0	0	0	0	0	0
605	LIBYA	0	0	0	0	0	0	0
606	QATAR	0	0	0	0	0	0	0

Exhibit 26
continued

FINANCE CATEGORY OF SUBSIDIARY BY COUNTRY OF INCORPORATION

Exhibit 26 (continued)

CODE	COUNTRY	(Assets) FINANCE CATEGORY LT $1M	$1M-$10M	$10M-$25M	$25M-$100M	GT $100M	UNKNOWN	TOTAL
607	SAUDI ARABIA	0	0	0	0	0	1	1
608	SYRIA	0	0	0	0	0	0	0
609	TRUCIAL STATES	0	0	0	0	0	0	0
610	BAHRAIN	0	0	0	0	0	0	0
611	CHAD	0	0	0	0	0	0	0
612	DHOFAR	0	0	0	0	0	0	0
613	DUBAI	0	0	0	0	0	0	0
614	ISRAEL	0	0	0	0	0	0	0
615	JORDAN	0	0	0	0	0	0	0
616	LEBANON	0	0	0	0	0	0	0
617	MALI	0	0	0	0	0	0	0
618	MAURITIANA	0	0	0	0	0	0	0
619	MOROCCO	0	0	1	0	0	0	1
620	MUSCAT AND OMAN	0	0	0	0	0	0	0
621	NIGER	0	0	0	0	0	0	0
622	SOMALI REPUBLIC	0	0	0	0	0	0	0
623	ADEN (SOUTHERN	0	0	0	0	0	0	0
623	SOUTHERN YEMEN	0	0	0	0	0	0	0
624	SPANISH NORTH A	0	0	0	0	0	0	0
625	SUDAN	0	0	0	0	0	0	0
626	TUNISIA	0	1	0	0	0	0	1
627	TURKEY	0	0	0	1	0	0	1
628	EGYPT (UNITED A	0	0	0	0	0	2	2
628	UNITED ARAB REP	0	0	0	0	0	0	0
629	YEMEN	0	0	0	0	0	0	0
701	AFGHANISTAN	0	0	0	0	0	0	0
702	CEYLON	0	0	0	0	0	0	0
703	INDIA	0	1	0	0	0	2	3
704	MALDIIVE ISLAND	0	0	0	0	0	0	0
705	NEPAL	0	0	0	0	0	0	0
706	PAKISTAN	0	0	0	0	0	1	1
707	SEYCHELLES	0	0	0	0	0	0	0
708	SIKKIM	0	0	0	0	0	0	0
709	BANGLADESH	0	0	0	0	0	0	0
800	AFRICA (N,F,S,)	0	0	0	0	0	0	0

Exhibit 26
continued

FINANCE CATEGORY OF SUBSIDIARY BY COUNTRY OF INCORPORATION

Exhibit 26 (continued)

CODE	COUNTRY	(Assets) FINANCE CATEGORY LT $1M	$1M-$10M	$10M-$25M	$25M-$100M	GT $100M	UNKNOWN	TOTAL
800	ZZ-(OLD: CENTRA	0	0	0	0	0	0	0
800	ZZ-(OLD: EAST A	0	0	0	0	0	0	0
800	ZZ-(OLD: NORTH	0	0	0	0	0	0	0
800	ZZ-(OLD: WEST A	0	0	0	0	0	0	0
801	AFARS AND ISSAS	0	0	0	0	0	0	0
801	FRENCH SOMALILA	0	0	0	0	0	0	0
802	ANGOLA	0	0	0	0	0	0	0
803	BOTSWANA	0	0	0	0	0	0	0
804	BURUNDI	0	0	0	0	0	0	0
805	CAMEROON	0	0	0	0	0	0	0
806	CAPE VERDE ISLA	0	0	0	0	0	0	0
807	CENTRAL AFRICAN	0	0	0	0	0	0	0
808	COMORO ISLANDS	0	0	0	0	0	0	0
809	CONGO, FRENCH	0	0	0	0	0	0	0
809	DEM. CONGO (BRA	0	0	0	0	0	0	0
810	DAHOMEY	0	0	0	0	0	0	0
811	EQUATORIAL GUIN	0	0	0	0	0	0	0
812	ETHIOPIA	0	0	0	0	0	0	0
813	GABON	0	0	0	0	0	0	0
814	GAMBIA	0	0	0	0	0	0	0
815	GHANA	0	0	0	0	0	0	0
816	GUINEA	0	0	0	0	0	0	0
817	IVORY COAST	0	0	0	0	0	0	0
818	KENYA	0	0	0	0	0	1	1
819	LESOTHO	0	0	0	0	0	0	0
820	LIBERIA	0	0	0	0	0	0	0
821	MALAGASY REPUBL	0	0	0	0	0	0	0
822	MALAWI	0	0	0	0	0	0	0
823	MAURITIUS	0	0	0	0	0	0	0
824	MOZAMBIQUE	0	1	0	0	0	0	1
825	NIGERIA	0	0	0	0	0	0	0
826	PORTUGUESE GUIN	0	0	0	0	0	0	0
827	REUNION	0	0	0	0	0	0	0
828	RUANDA	0	0	0	0	0	0	0
829	SAO TOME AND PR	0	0	0	0	0	0	0

Exhibit 26 continued

FINANCE CATEGORY OF SUBSIDIARY BY COUNTRY OF INCORPORATION

Exhibit 26 (continued)

CODE	COUNTRY	(Assets) FINANCE CATEGORY LT $1M	$1M-$10M	$10M-$25M	$25M-$100M	GT $100M	UNKNOWN	TOTAL
830	SENEGAL	0	0	0	0	0	0	0
831	SIERRA LEONE	0	0	0	0	0	0	0
832	SWAZILAND	0	0	0	0	0	0	0
833	TANZANIA	0	0	0	0	0	0	0
834	TOGO	0	0	0	0	0	0	0
835	UGANDA	0	0	0	0	0	0	0
836	UPPER VOLTA	0	0	0	0	0	0	0
837	ZAMBIA	0	0	0	0	0	0	0
838	CONGO, BELGIAN	0	1	0	0	0	1	2
838	REP. CONGO (ZAI	0	0	0	0	0	0	0
838	ZAIRE (REP. OR	0	0	0	0	0	0	0
839	MADGASCAR	0	0	0	0	0	0	0
901	AMERICAN SAMOA	0	0	0	0	0	0	0
902	BRITISH SOLOMON	0	0	0	0	0	0	0
903	BRUNEI	0	0	0	0	0	0	0
904	BURMA	0	0	0	0	0	0	0
905	CAMBODIA	0	0	0	0	0	0	0
906	CHINA (MAINLAND	0	0	0	0	0	0	0
907	CHINA (TAIWAN)	0	1	0	0	0	1	2
907	TAIWAN	0	0	0	0	0	0	0
908	FIJI	0	0	0	0	0	0	0
909	FRENCH POLYNESI	0	0	0	0	0	0	0
910	GUAM	0	0	0	0	0	0	0
911	HONG KONG	0	0	0	0	0	0	0
912	INDONESIA (2ND	0	0	0	0	0	2	2
912	INDONESIA (1ST	0	0	0	0	0	0	0
913	JAPAN	2	1	2	0	2	2	9
914	KOREA (NORTH)	0	0	0	0	0	0	0
915	KOREA (SOUTH)	0	0	1	0	0	0	1
916	LAOS	0	0	0	0	0	0	0
917	MACAU	0	0	0	0	0	0	0
918	MALAYSIA	0	1	0	0	0	0	1
919	MONGOLIA	0	0	0	0	0	0	0
920	NEW CALEDONIA	0	0	0	0	0	0	0
921	NEW GUINEA AND	0	0	0	0	0	0	0

Exhibit 26 continued

FINANCE CATEGORY OF SUBSIDIARY BY COUNTRY OF INCORPORATION

Exhibit 26 (continued)

CODE	COUNTRY	(Assets) FINANCE CATEGORY LT $1M	$1M-$10M	$10M-$25M	$25M-$100M	GT $100M	UNKNOWN	TOTAL
922	NEW HEBRIDES	0	0	0	0	0	0	0
923	PHILLIPINES	0	2	1	0	0	1	4
924	PORTUGUESE TIMO	0	0	0	0	0	0	0
925	RYUKYU ISLANDS	0	0	0	0	0	0	0
926	SINGAPORE	1	0	0	0	0	3	4
927	THAILAND	1	2	0	0	0	0	3
928	TONGA	0	0	0	0	0	0	0
929	VIETNAM (NORTH)	0	0	0	0	0	0	0
930	VIETNAM (SOUTH)	0	0	0	0	0	0	0
931	WESTERN SAMOA	0	0	0	0	0	0	0

Exhibit 26 continued

Source: Harvard's Multinational Enterprise Database.

Exhibit 27

Number of Foreign Subsidiaries Classified by Asset Categories and by Area of Incorporation

Area	Asset Categories						
	Lt $1m	$1m-10m	$10m-25m	$25m-100m	Gt $100m	Unk.	Total
North America	3	4	0	3	6	52	68
Latin America	9	5	6	11	8	26	65
Western Europe	13	17	17	17	10	82	156
Eastern Europe	0	0	0	0	0	3	3
Mid East	0	2	1	1	0	5	9
Near East	0	1	0	0	0	3	4
Africa	0	2	1	1	1	13	18
Far East	4	7	4	0	2	9	26
Australia/New Zealand	0	3	2	1	3	12	21

Source: Consultants' calculations based on Exhibit 26.

Exhibit 28

Number of Foreign Subsidiaries as Percentage of Total Subsidiaries within Each Region Classified by Asset Categories

Area	Asset Categories					
	Lt $1m	$1m-10m	$10m-25m	$25m-100m	Gt $100m	Total (1)
North America	18.8	25.0	0	18.8	37.5	100.0
Latin America	23.1	12.8	15.4	28.2	20.5	100.0
Western Europe	17.5	23.0	23.0	23.0	13.5	100.0
Eastern Europe	0	0	0	0	0	0
Mid East	0	50.0	25.0	25.0	0	100.0
Near East	0	100.0	0	0	0	100.0
Africa	0	40.0	20.0	20.0	20.0	100.0
Far East	23.5	41.2	23.5	0	11.8	100.0
Australia/New Zealand	0	33.3	22.1	11.1	33.3	100.0

[1] Excludes unknown category.

Source: Consultants' calculations based on Exhibit 27.

Exhibit 29

Data for U.S. Automotive Multinationals
Finance Category: Subsidiaries by Country of Incorporation as Percentage of Each Finance Category - Assets

Area	Lt $1m	$1m-10m	$10m-25m	$25m-100m	Gt $100
North America	10.3%	9.8%	0	8.9	20.0
Latin America	31.1	12.2	19.4	32.4	26.7
Western Europe	44.8	41.4	54.8	50.0	33.3
Eastern Europe	0	0	0	0	0
Mid East	0	4.9	3.2	21.9	0
Near East	0	2.4	0	0	0
Africa	0	4.9	3.2	2.9	3.3
Far East	13.8	17.1	12.9	0	6.7
Australia/New Zealand	0	7.3	6.5	2.9	10.0
Total	100.0%	100.0%	100.0%	100.0%	100.0%

Source: Consultants' calculations based on Exhibit 27.

Exhibit 30

Ranking of Number of Foreign Subsidiaries Classified by Country of Incorporation and Asset Categories (1)

Area	Asset Categories						
	Lt $1m	$1m-10m	$10m-25m	$25m-100m	Gt $100m	Unk.	Total
United Kingdom	7	2	2	4	4	31	50
France	0	2	1	6	1	12	22
Australia	0	3	1	0	3	10	17
West Germany	2	0	1	0	2	11	16
Brazil	1	0	1	1	3	7	13
Mexico	2	0	2	3	1	4	12
Italy	2	1	1	1	0	6	11
South Africa	0	0	1	1	1	8	11
Argentina	2	0	2	0	3	3	10
Japan	2	1	2	0	2	2	9
Spain	0	2	1	0	1	4	8
Switzerland	0	1	3	0	1	3	8
Venezuela	1	2	0	3	0	1	7
Columbia	1	1	0	3	0	1	6
Sweden	1	0	0	2	0	3	6

[1] Includes 15 countries with largest number of total subsidiaries, 1976, (excluding U.S. and Canada).

Source: Consultants' calculations based on Exhibit 26.

Exhibit 31

Concentration of Number of Foreign Subsidiaries Classified by Country of Incorporation and Asset Categories

Financial Categories	Ratio of Subsid. in 5 Largest Countries to Total Subsid.[1]	Ratio of Subsid. in 10 Largest Countries to Total Subsid.[2]	Ratio of Subsid. in 15 Largest Countries to Total Subsid.[3]
Lt. $1m	.385 (10/26)	.692 (18/26)	.808 (21/26)
$1m-10m	.189 (7/37)	.243 (9/37)	.405 (15/37)
$10m-25m	.194 (6/31)	.452 (14/31)	.581 (18/31)
$25m-100m	.355 (11/31)	.516 (16/31)	.774 (24/31)
Gt. $100m	.542 (13/24)	.833 (20/24)	.917 (22/24)
Unk.	.235 (71/153)	.614 (94/153)	.693 (106/153)
Total	.391 (118/302)	.566 (171/302)	.682 (206/302)

[1]Large in the sense of having the largest number of subsidiaries; includes United Kingdom, France, Australia, West Germany & Brazil.

[2]Includes Mexico, Italy, South Africa, Argentina and Japan in addition to the above.

[3]Includes Spain, Switzerland, Venezuela, Columbia and Sweden in addition to the above.

Source: Consultants' calculations based on Exhibit 26.

FINANCE CATEGORY OF SUBSIDIARY BY COUNTRY OF INCORPORATION

Exhibit 32

(Equity) FINANCE CATEGORY

CODE	COUNTRY	LT $1M	$1M-$10M	$10M-$25M	$25M-$100M	GT $100M	UNKNOWN	TOTAL
1	INTERNATIONAL (	0	0	0	0	0	0	0
1	ZZ=(OLD; ASIA A	0	0	0	0	0	0	0
1	ZZ=(OLD; EUROPE	0	0	0	0	0	0	0
1	ZZ=(OLD; WESTER	0	0	0	0	0	0	0
101	AUSTRALIA	1	4	2	2	0	8	17
102	CANADA	3	6	1	1	4	29	44
103	NEW ZEALAND	0	2	0	0	0	2	4
104	RHODESIA	0	0	0	0	0	3	3
105	ST. PIERRE AND	0	0	0	0	0	0	0
106	SOUTH AFRICA	1	2	0	0	0	8	11
107	SOUTH WEST AFRI	0	0	0	0	0	0	0
108	UNITED STATES	1	0	2	1	2	18	24
109	ANTIGUA	0	0	0	0	0	0	0
200	CENTRAL AMERICA	0	0	0	0	0	0	0
200	ZZ=(OLD; BRITIS	0	0	0	0	0	0	0
202	BAHAMAS	0	0	0	0	0	0	0
203	BARBADOS	0	0	0	0	0	0	0
204	BERMUDA	0	0	1	0	0	1	2
205	BELIZE (BRITISH	0	0	0	0	0	0	0
205	BRITISH HONDURA	0	0	0	0	0	0	0
206	CANAL ZONE (PAN	0	0	0	0	0	0	0
207	COSTA RICA	0	0	0	0	0	0	0
208	CUBA	0	0	0	0	0	1	1
209	DOMINICA	0	0	0	0	0	0	0
210	DOMINICAN REPUB	0	0	0	0	0	0	0
211	EL SALVADOR	0	0	0	0	0	0	0
212	GRENADA	0	0	0	0	0	0	0
213	GUADELOPE	0	0	0	0	0	0	0
214	GUATEMALA	0	0	0	0	0	0	0
215	HAITI	0	0	0	0	0	0	0
216	HONDURAS	0	0	0	0	0	0	0
217	JAMAICA	0	0	0	0	0	1	1
218	MARTINIQUE	0	0	0	0	0	0	0
219	MEXICO	2	2	2	1	0	5	12

Exhibit 32

Number of Foreign Subsidiaries Classified by Geographic Location and Size of Equity in 1976.

FINANCE CATEGORY OF SUBSIDIARY BY COUNTRY OF INCORPORATION

Exhibit 32 continued

CODE	COUNTRY	(Equity) FINANCE CATEGORY LT $1M	$1M-$10M	$10M-$25M	$25M-$100M	GT $100M	UNKNOWN	TOTAL
220	DUTCH (NETHERLA	0	2	0	0	0	0	2
220	DUTCH (NETHERLA	0	0	0	0	0	0	0
220	NETHERLANDS (DU	0	0	0	0	0	0	0
220	NETHERLANDS (DU	0	0	0	0	0	0	0
221	NICARAGUA	0	0	0	0	0	0	0
222	PANAMA	1	0	0	0	0	0	1
223	PUERTO RICO	0	0	0	0	0	0	0
224	ST. KITTS-NEVIS	0	0	0	0	0	0	0
225	ST. LUCIA	0	0	0	0	0	0	0
226	ST. VINCENT	0	0	0	0	0	0	0
227	TRINIDAD AND TO	0	0	0	0	0	0	0
228	VIRGIN ISLANDS	0	0	0	0	0	0	0
300	LATIN AMERICA (	0	0	0	0	0	0	0
301	BOLIVIA	0	0	0	0	0	0	0
302	CHILE	1	0	0	0	0	2	3
303	COLOMBIA	1	1	1	1	0	2	6
304	ECUADOR	0	0	0	0	0	0	0
305	PERU	0	1	0	0	0	3	4
306	ARGENTINA	3	1	1	2	0	3	10
307	BRAZIL	1	1	1	1	2	7	13
308	FRENCH GUYANA	0	0	0	0	0	0	0
309	BRITISH GUYANA	0	0	0	0	0	0	0
309	BRITISH GUYANA	0	0	0	0	0	0	0
309	GUYANA (BRITISH	0	0	0	0	0	0	0
309	GUYANA (BRITISH	0	0	0	0	0	0	0
310	PARAGUAY	0	0	0	0	0	0	0
311	DUTCH GUIANA (S	0	0	0	0	0	0	0
311	SURINAM (DUTCH	0	0	0	0	0	0	0
312	URUGUAY	2	0	0	0	0	1	3
313	VENEZUELA	3	2	1	0	0	1	7
401	BELGIUM	1	2	1	0	0	1	5
402	FRANCE	2	3	4	0	1	12	22
403	GERMANY (WEST,	6	1	1	0	2	6	16
404	ITALY	4	1	0	0	0	6	11
405	LUXEMBOURG	0	0	0	0	0	1	1

Exhibit 32 continued

FINANCE CATEGORY OF SUBSIDIARY BY COUNTRY OF INCORPORATION

Exhibit 32 continued

(Equity)

CODE	COUNTRY	FINANCE CATEGORY LT $1M	$1M-$10M	$10M-$25M	$25M-$100M	GT $100M	UNKNOWN	TOTAL
406	NETHERLANDS	0	1	1	0	0	2	4
407	DENMARK	1	3	0	0	0	2	6
408	IRELAND	0	4	0	0	0	2	6
409	UNITED KINGDOM	11	3	3	3	0	30	50
410	AUSTRIA	2	1	0	0	0	1	4
411	CYPRUS	0	0	0	0	0	0	0
412	FINLAND	0	1	1	0	0	0	2
413	GREECE	0	0	0	0	0	2	2
414	ICELAND	0	0	0	0	0	0	0
415	LIECHTENSTEIN	0	0	0	0	0	0	0
416	MALTA	0	0	0	0	0	0	0
417	MONACO	0	0	0	0	0	0	0
418	NORWAY	2	1	0	0	0	0	3
419	PORTUGAL	1	0	0	0	0	1	2
420	SPAIN	1	3	0	1	0	3	8
421	SWEDEN	1	1	0	1	0	3	6
422	SWITZERLAND	3	1	0	0	1	3	8
501	ALBANIA	0	0	0	0	0	0	0
502	ANDORRA	0	0	0	0	0	0	0
503	BULGARIA	0	0	0	0	0	0	0
504	CZECHOSLOVAKIA	0	0	0	0	0	0	0
505	GERMANY (EAST)	0	0	0	0	0	0	0
506	GIBRALTAR	0	0	0	0	0	0	0
507	HUNGARY	0	0	0	0	0	1	1
508	POLAND	0	0	0	0	0	1	1
509	RUMANIA	0	0	0	0	0	1	1
510	SAN MARINO	0	0	0	0	0	0	0
511	USSR (RUSSIA)	0	0	0	0	0	0	0
512	YUGOSLAVIA	0	0	0	0	0	0	0
601	ALGERIA	0	0	0	0	0	2	2
602	IRAN	0	0	0	0	0	1	1
603	IRAQ	0	0	0	0	0	0	0
604	KUWAIT	0	0	0	0	0	0	0
605	LIBYA	0	0	0	0	0	0	0
606	QATAR	0	0	0	0	0	0	0

Exhibit 32 continued

Exhibit 32 continued

CODE	COUNTRY	(Equity) FINANCE CATEGORY LT $1M	$1M-$10M	$10M-$25M	$25M-$100M	GT $100M	UNKNOWN	TOTAL
607	SAUDI ARABIA	0	0	0	0	0	1	1
608	SYRIA	0	0	0	0	0	0	0
609	TRUCIAL STATES	0	0	0	0	0	0	0
610	BAHRAIN	0	0	0	0	0	0	0
611	CHAD	0	0	0	0	0	0	0
612	DHOFAR	0	0	0	0	0	0	0
613	DUBAI	0	0	0	0	0	0	0
614	ISRAEL	0	0	0	0	0	0	0
615	JORDAN	0	0	0	0	0	0	0
616	LEBANON	0	0	0	0	0	0	0
617	MALI	0	0	0	0	0	0	0
618	MAURITIANA	0	0	0	0	0	0	0
619	MOROCCO	0	1	0	0	0	0	1
620	MUSCAT AND OMAN	0	0	0	0	0	0	0
621	NIGER	0	0	0	0	0	0	0
622	SOMALI REPUBLIC	0	0	0	0	0	0	0
623	ADEN (SOUTHERN	0	0	0	0	0	0	0
623	SOUTHERN YEMEN	0	0	0	0	0	0	0
624	SPANISH NORTH A	0	0	0	0	0	0	0
625	SUDAN	0	0	0	0	0	0	0
626	TUNISIA	1	0	0	0	0	0	1
627	TURKEY	0	1	0	0	0	0	1
628	EGYPT (UNITED A	0	0	0	0	0	2	2
628	UNITED ARAB REP	0	0	0	0	0	0	0
629	YEMEN	0	0	0	0	0	0	0
701	AFGHANISTAN	0	0	0	0	0	0	0
702	CEYLON	0	0	0	0	0	0	0
703	INDIA	1	0	0	0	0	2	3
704	MALDIIVE ISLAND	0	0	0	0	0	0	0
705	NEPAL	0	0	0	0	0	0	0
706	PAKISTAN	0	0	0	0	0	1	1
707	SEYCHELLES	0	0	0	0	0	0	0
708	SIKKIM	0	0	0	0	0	0	0
709	BANGLADESH	0	0	0	0	0	0	0
800	AFRICA (N.F.S.)	0	0	0	0	0	0	0

Exhibit 32 continued

FINANCE CATEGORY OF SUBSIDIARY BY COUNTRY OF INCORPORATION

Exhibit 32 continued

(Equity)

CODE	COUNTRY	FINANCE CATEGORY LT $1M	$1M-$10M	$10M-$25M	$25M-$100M	GT $100M	UNKNOWN	TOTAL
800	ZZ-(OLD: CENTRA	0	0	0	0	0	0	0
800	ZZ-(OLD: EAST A	0	0	0	0	0	0	0
800	ZZ-(OLD: NORTH	0	0	0	0	0	0	0
800	ZZ-(OLD: WEST A	0	0	0	0	0	0	0
801	AFARS AND ISSAS	0	0	0	0	0	0	0
801	FRENCH SOMALILA	0	0	0	0	0	0	0
802	ANGOLA	0	0	0	0	0	0	0
803	BOTSWANA	0	0	0	0	0	0	0
804	BURUNDI	0	0	0	0	0	0	0
805	CAMEROON	0	0	0	0	0	0	0
806	CAPE VERDE ISLA	0	0	0	0	0	0	0
807	CENTRAL AFRICAN	0	0	0	0	0	0	0
808	COMORO ISLANDS	0	0	0	0	0	0	0
809	CONGO, FRENCH	0	0	0	0	0	0	0
809	DEM. CONGO (BRA	0	0	0	0	0	0	0
810	DAHOMEY	0	0	0	0	0	0	0
811	EQUATORIAL GUIN	0	0	0	0	0	0	0
812	ETHIOPIA	0	0	0	0	0	0	0
813	GABON	0	0	0	0	0	0	0
814	GAMBIA	0	0	0	0	0	0	0
815	GHANA	0	0	0	0	0	0	0
816	GUINEA	0	0	0	0	0	0	0
817	IVORY COAST	0	0	0	0	0	0	0
818	KENYA	0	0	0	0	0	1	1
819	LESOTHO	0	0	0	0	0	0	0
820	LIBERIA	0	0	0	0	0	0	0
821	MALAGASY REPUBL	0	0	0	0	0	0	0
822	MALAWI	0	0	0	0	0	0	0
823	MAURITIUS	0	0	0	0	0	0	0
824	MOZAMBIQUE	0	1	0	0	0	0	1
825	NIGERIA	0	0	0	0	0	0	0
826	PORTUGUESE GUIN	0	0	0	0	0	0	0
827	REUNION	0	0	0	0	0	0	0
828	RUANDA	0	0	0	0	0	0	0
829	SAO TOME AND PR	0	0	0	0	0	0	0

Exhibit 32 continued

FINANCE CATEGORY OF SUBSIDIARY BY COUNTRY OF INCORPORATION

Exhibit 32 continued

CODE	COUNTRY	(Equity) FINANCE CATEGORY LT $1M	$1M-$10M	$10M-$25M	$25M-$100M	GT $100M	UNKNOWN	TOTAL
830	SENEGAL	0	0	0	0	0	0	0
831	SIERRA LEONE	0	0	0	0	0	0	0
832	SWAZILAND	0	0	0	0	0	0	0
833	TANZANIA	0	0	0	0	0	0	0
834	TOGO	0	0	0	0	0	0	0
835	UGANDA	0	0	0	0	0	0	0
836	UPPER VOLTA	0	0	0	0	0	0	0
837	ZAMBIA	0	0	0	0	0	0	0
838	CONGO, BELGIAN	1	0	0	0	0	1	2
838	REP. CONGO (ZAI	0	0	0	0	0	0	0
838	ZAIRE (REP. OR	0	0	0	0	0	0	0
839	MADAGASCAR	0	0	0	0	0	0	0
901	AMERICAN SAMOA	0	0	0	0	0	0	0
902	BRITISH SOLOMON	0	0	0	0	0	0	0
903	BRUNEI	0	0	0	0	0	0	0
904	BURMA	0	0	0	0	0	0	0
905	CAMBODIA	0	0	0	0	0	0	0
906	CHINA (MAINLAND	0	0	0	0	0	0	0
907	CHINA (TAIWAN)	0	1	0	0	0	1	2
907	TAIWAN	0	0	0	0	0	0	0
908	FIJI	0	0	0	0	0	0	0
909	FRENCH POLYNESI	0	0	0	0	0	0	0
910	GUAM	0	0	0	0	0	0	0
911	HONG KONG	0	0	0	0	0	0	0
912	INDONESIA (2ND	0	0	0	0	0	2	2
912	INDONESIA (1ST	0	0	0	0	0	0	0
913	JAPAN	3	1	0	0	2	3	9
914	KOREA (NORTH)	0	0	0	0	0	0	0
915	KOREA (SOUTH)	0	0	0	0	0	1	1
916	LAOS	0	0	0	0	0	0	0
917	MACAU	0	0	0	0	0	0	0
918	MALAYSIA	0	1	0	0	0	0	1
919	MONGOLIA	0	0	0	0	0	0	0
920	NEW CALEDONIA	0	0	0	0	0	0	0
921	NEW GUINEA AND	0	0	0	0	0	0	0

Exhibit 32 continued

FINANCE CATEGORY OF SUBSIDIARY BY COUNTRY OF INCORPORATION

Exhibit 32 continued

(Equity) FINANCE CATEGORY

CODE	COUNTRY	LT $1M	$1M-$10M	$10M-$25M	$25M-$100M	GT $100M	UNKNOWN	TOTAL
922	NEW HEBRIDES	0	0	0	0	0	0	0
923	PHILLIPINES	1	3	0	0	0	0	4
924	PORTUGUESE TIMO	0	0	0	0	0	0	0
925	RYUKYU ISLANDS	0	0	0	0	0	0	0
926	SINGAPORE	1	0	0	0	0	3	4
927	THAILAND	3	0	0	0	0	0	3
928	TONGA	0	0	0	0	0	0	0
929	VIETNAM (NORTH)	0	0	0	0	0	0	0
930	VIETNAM (SOUTH)	0	0	0	0	0	0	0
931	WESTERN SAMOA	0	0	0	0	0	0	0

Exhibit 32 continued

Source: Harvard's Multinational Enterprise Databank.

Exhibit 33

Number of Foreign Subsidiareis Classified by Equity Categories and by Area of Incorporation for 1976

Area	Equity Categories						
	Lt $1m	$1m-10m	$10m-25m	$25m-100m	Gt $100m	Unk.	Total
North America	4	6	3	2	6	47	68
Latin America	14	10	7	5	2	27	65
Western Europe	35	26	11	5	4	75	156
Eastern Europe	0	0	0	0	0	3	3
Mid East	1	2	0	0	0	6	9
Near East	1	0	0	0	0	3	4
Africa	2	3	0	0	0	13	18
Far East	8	6	0	0	2	10	26
Australia/New Zealand	1	6	2	2	0	10	21

Source: Consultants' calculations based on Exhibit 32.

Exhibit 34

Number of Foreign Subsidiaries
As Percentage of Total Subsidiaries
Within Each Region Classified by Equity
Categories

Area	Equity Categories					
	Lt $1m	$1m-10m	$10m-25m	$25m-100m	Gt $100m	Total
	Percentages					
North America	19.0	28.6	14.3	9.5	28.6	100.0
Latin America	36.8	26.3	18.4	13.2	5.3	100.0
Western Europe	43.2	32.1	13.6	6.2	4.9	100.0
Eastern Europe	0	0	0	0	0	0
Mid East	33.3	66.7	0	0	0	100.0
Near East	100.0	0	0	0	0	100.0
Africa	40.0	60.0	0	0	0	100.0
Far East	50.0	37.5	0	0	12.5	100.0
Australia/New Zealand	9.1	54.5	18.2	18.2	0	100.0

[1]Excludes unknown category

Source: Consultants' calculations based on Exhibit 33.

Exhibit 35

Number of Foreign Subsidiareis as Percentage of Total Subsidiaries within Each Equity Category Classified by Geographic Region

Area	Lt $1m	$1m-10m	$10m-25m	$25m-100m	Gt $100m
North America	6.1%	10.2%	13.0	14.3%	42.8
Latin America	21.2	16.9	30.4	35.7	14.3
Western Europe	53.0	44.0	47.9	35.7	28.6
Eastern Europe	0	0	0	0	0
Mid East	1.5	3.4	0	0	0
Near East	1.5	0	0	0	0
Africa	3.0	5.1	0	0	0
Far East	12.2	10.2	0	0	14.3
Australia/New Zealand	1.5	10.2	8.7	14.3	0
Total	100.0%	100.0%	100.0%	100.0%	100.0%

Source: Consultants' calculations based on Exhibit 33.

Exhibit 36

Ranking of Number of Subsidiaries Classified by Data for U.S. Automotive Multinationals Equity Category and Country of Incorporation(1)

Area	Lt $1m	$1m-10m	$10m-25m	$25m-100m	Gt $100m	Unk.	Total
United Kingdom	11	3	3	3	0	30	50
France	2	3	4	0	1	12	22
Australia	1	4	2	2	0	8	17
West Germany	6	1	1	0	2	6	16
Brazil	1	1	1	1	2	7	13
Mexico	2	2	2	1	0	5	12
Italy	4	1	0	0	0	6	11
South Africa	1	2	0	0	0	8	11
Argentina	3	1	1	2	0	3	10
Japan	3	1	0	0	2	3	9
Spain	1	3	0	1	0	3	8
Switzerland	3	1	0	0	1	3	8
Venezuela	3	2	1	0	0	1	7
Columbia	1	1	1	1	0	2	6
Sweden	1	1	0	1	0	3	6

[1]Includes 15 countries with largest number of total subsidiaries, 1976 (excluding U.S. & Canada).

Source: Consultants' calculations based on Exhibit 32.

Exhibit 37

Concentration of Number of Foreign Subsidiaries Classified by Country of Incorporation and Equity Category

Financial Categories	Ratio of Subsid. in 5 Largest Countries to Total Subsid.[1]	Ratio of Subsid. in 10 Largest Countries to Total Subsid.[2]	Ratio of Subsid. in 15 Largest Countries to Total Subsid.[3]
Lt. $1m	.339 (21/62)	.548 (34/62)	.649 (43/62)
$1m-10m	.226 (12/53)	.359 (19/53)	.509 (27/53)
$10m-25m	.550 (11/20)	.700 (14/20)	.800 (16/20)
$25m-100m	.500 (6/12)	.750 (9/12)	1.000 (12/12)
Gt. $100m	.625 (5/28)	.875 (7/8)	1.000 (8/8)
Unk.	.429 (63/147)	.599 (88/147)	.680 (100/147)
Total	.391 (118/302)	.566 (171/302)	.682 (206/302)

[1]Large in the sense of having the largest number of subsidiaries; includes United Kingdom, France, Australia, West Germany & Brazil.

[2]Includes Mexico, Italy, South Africa, Argentina & Japan in addition to the above.

[3]Includes Spain, Switzerland, Venezuela, Columbia & Sweden in addition to the above.

Source: Consultants' calculations based on Exhibit 32.

Exhibit 38

Non-European Nations with Subsidiaries Having Sales, Assets, or Equity in Excess of $100 Million in 1976

	The Number of Subsidiaries		
	Sales	Assets	Equity
1) Australia	3	3	0
2) New Zealand	1	0	0
3) South Africa	2	1	0
4) Mexico	3	1	0
5) Argentina	3	3	0
6) Brazil	3	3	2
7) Venezuela	3	0	0
8) Japan	2	2	2
Total	20	13	4

Source: Exhibits 20, 26 and 32.

Exhibit 39

Number of Foreign Subsidiaries Classified by Their Principal Activity and Percentage of Sales Exported in 1976.

Activity	Manufacturing	R&D	Sales	Other	Unknown	Exited	Total
Sales Exported							
<10%	49	0	29	3	0	0	81
10%-50%	20	0	0	0	1	0	21
>50%	11	0	2	1	1	0	15
Unknown	44	0	75	39	28	79	255
Total	124	0	106	43	20	79	372

Source: Harvard Multinational Enterprise Project.

Exhibit 40

Data for U.S. Automotive Multinationals

Percentage of Each Activity by Export Classification*

% Sales Exported	% Manufacturing	% Sales	% Other
<10%	61	94	75
10% - 50%	25	0	0
>50%	14	6	25
Total	100%	100%	100%

*Unknowns not included.

Source: Consultant's calculations based on Exhibit 39.

DATA FOR U.S. AUTOMOTIVE MULTINATIONALS
PRINCIPAL MARKET OF SALES BY COUNTRY OF INCORPORATION AT LATEST

Exhibit 41

SALES TO EXPORT		< 10%	10%-50%	> 50%	UNKNOWN	TOTAL
CODE	COUNTRY					
1	INTERNATIONAL (	0	0	0	0	0
1	ZZ=(OLD: ASIA A	0	0	0	0	0
1	ZZ=(OLD: EUROPE	0	0	0	0	0
1	ZZ=(OLD: WESTER	0	0	0	0	0
101	AUSTRALIA	4	1	0	12	17
102	CANADA	6	2	1	35	44
103	NEW ZEALAND	2	0	0	2	4
104	RHODESIA	0	0	0	3	3
105	ST. PIERRE AND	0	0	0	0	0
106	SOUTH AFRICA	3	0	0	8	11
107	SOUTH WEST AFRI	0	0	0	0	0
108	UNITED STATES	0	1	0	23	24
109	ANTIGUA	0	0	0	0	0
200	CENTRAL AMERICA	0	0	0	0	0
200	ZZ=(OLD: BRITIS	0	0	0	0	0
202	BAHAMAS	0	0	0	0	0
203	BARBADOS	0	0	0	0	0
204	BERMUDA	0	0	0	2	2
205	BELIZE (BRITISH	0	0	0	0	0
205	BRITISH HONDURA	0	0	0	0	0
206	CANAL ZONE (PAN	0	0	0	0	0
207	COSTA RICA	0	0	0	0	0
208	CUBA	0	0	0	1	1
209	DOMINICA	0	0	0	0	0
210	DOMINICAN REPUB	0	0	0	0	0
211	EL SALVADOR	0	0	0	0	0
212	GRENADA	0	0	0	0	0
213	GUADELOUPE	0	0	0	0	0
214	GUATEMALA	0	0	0	0	0
215	HAITI	0	0	0	0	0
216	HONDURAS	0	0	0	0	0
217	JAMAICA	0	0	0	1	1
218	MARTINIQUE	0	0	0	0	0
219	MEXICO	3	2	0	7	12
220	DUTCH (NETHERLA	1	0	0	1	2
221	DUTCH (NETHERLA	0	0	0	0	0
220	NETHERLANDS (DU	0	0	0	0	0
220	NETHERLANDS (DU	0	0	0	0	0
221	NICARAGUA	0	0	0	0	0

Exhibit 41

Number of Foreign Subsidiaries Classified by Geographic Location and Percentage of Sale Exported in 1976.

DATA FOR U.S. AUTOMOTIVE MULTINATIONALS
PRINCIPAL MARKET OF SALES BY COUNTRY OF INCORPORATION AT LATEST

Exhibit 41 (continued)

SALES TO EXPORT		< 10%	10%-50%	> 50%	UNKNOWN	TOTAL
CODE	COUNTRY					
222	PANAMA	0	0	0	1	1
223	PUERTO RICO	0	0	0	0	0
224	ST. KITTS-NEVIS	0	0	0	0	0
225	ST. LUCIA	0	0	0	0	0
226	ST. VINCENT	0	0	0	0	0
227	TRINIDAD AND TO	0	0	0	0	0
228	VIRGIN ISLANDS	0	0	0	0	0
300	LATIN AMERICA (	0	0	0	0	0
301	BOLIVIA	0	0	0	0	0
302	CHILE	1	0	0	2	3
303	COLOMBIA	2	0	0	4	6
304	ECUADOR	0	0	0	0	0
305	PERU	1	0	0	3	4
306	ARGENTINA	5	1	0	4	10
307	BRAZIL	5	1	0	7	13
308	FRENCH GUIANA	0	0	0	0	0
309	BRITISH GUYANA	0	0	0	0	0
309	BRITISH GUYANA	0	0	0	0	0
309	GUYANA (BRITISH	0	0	0	0	0
309	GUIANA (BRITISH	0	0	0	0	0
310	PARAGUAY	0	0	0	0	0
311	DUTCH GUIANA (S	0	0	0	0	0
311	SURINAM (DUTCH	0	0	0	0	0
312	URUGUAY	3	0	0	0	3
313	VENEZUELA	3	1	0	3	7
401	BELGIUM	1	1	1	2	5
402	FRANCE	1	4	2	15	22
403	GERMANY (WEST,	4	0	2	10	16
404	ITALY	1	0	0	10	11
405	LUXEMBOURG	0	0	1	0	1
406	NETHERLANDS	1	1	0	2	4
407	DENMARK	3	0	0	3	6
408	IRELAND	1	0	1	4	6
409	UNITED KINGDOM	3	3	5	39	50
410	AUSTRIA	1	0	0	3	4
411	CYPRUS	0	0	0	0	0
412	FINLAND	2	0	0	0	2
413	GREECE	0	0	0	2	2
414	ICELAND	0	0	0	0	0
415	LIECHTENSTEIN	0	0	0	0	0

Exhibit 41
continued

DATA FOR U.S. AUTOMOTIVE MULTINATIONALS
PRINCIPAL MARKET OF SALES BY COUNTRY OF INCORPORATION AT LATEST

Exhibit 41 (continued)

SALES TO EXPORT	< 10%	10%-50%	> 50%	UNKNOWN	TOTAL
CODE COUNTRY					
416 MALTA	0	0	0	0	0
417 MONACO	0	0	0	0	0
418 NORWAY	2	0	0	1	3
419 PORTUGAL	0	0	0	2	2
420 SPAIN	1	0	1	6	8
421 SWEDEN	1	0	0	5	6
422 SWITZERLAND	3	0	1	4	8
501 ALBANIA	0	0	0	0	0
502 ANDORRA	0	0	0	0	0
503 BULGARIA	0	0	0	0	0
504 CZECHOSLOVAKIA	0	0	0	0	0
505 GERMANY (EAST)	0	0	0	0	0
506 GIBRALTAR	0	0	0	0	0
507 HUNGARY	0	0	0	1	1
508 POLAND	0	0	0	1	1
509 ROMANIA	0	0	0	1	1
510 SAN MARINO	0	0	0	0	0
511 USSR (RUSSIA)	0	0	0	0	0
512 YUGOSLAVIA	0	0	0	0	0
601 ALGERIA	1	0	0	1	2
602 IRAN	0	0	0	1	1
603 IRAQ	0	0	0	0	0
604 KUWAIT	0	0	0	0	0
605 LIBYA	0	0	0	0	0
606 QATAR	0	0	0	0	0
607 SAUDI ARABIA	0	0	0	1	1
608 SYRIA	0	0	0	0	0
609 TRUCIAL STATES	0	0	0	0	0
610 BAHRAIN	0	0	0	0	0
611 CHAD	0	0	0	0	0
612 DHOFAR	0	0	0	0	0
613 DUBAI	0	0	0	0	0
614 ISRAEL	0	0	0	0	0
615 JORDAN	0	0	0	0	0
616 LEBANON	0	0	0	0	0
617 MALI	0	0	0	0	0
618 MAURITIANA	0	0	0	0	0
619 MOROCCO	1	0	0	0	1
620 MUSCAT AND OMAN	0	0	0	0	0
621 NIGER	0	0	0	0	0

Exhibit 41
continued

DATA FOR U.S. AUTOMOTIVE MULTINATIONALS
PRINCIPAL MARKET OF SALES BY COUNTRY OF INCORPORATION AT LATEST

Exhibit 41 (continued)

SALES TO EXPORT	< 10%	10%-50%	> 50%	UNKNOWN	TOTAL
CODE COUNTRY					
624 SOMALI REPUBLIC	0	0	0	0	0
623 ADEN (SOUTHERN	0	0	0	0	0
623 SOUTHERN YEMEN	0	0	0	0	0
624 SPANISH NORTH A	0	0	0	0	0
625 SUDAN	0	0	0	0	0
626 TUNISIA	0	0	0	1	1
627 TURKEY	1	0	0	0	1
628 EGYPT (UNITED A	0	0	0	2	2
628 UNITED ARAB REP	0	0	0	0	0
629 YEMEN	0	0	0	0	0
701 AFGHANISTAN	0	0	0	0	0
702 CEYLON	0	0	0	0	0
703 INDIA	1	0	0	2	3
704 MALDIVE ISLAND	0	0	0	0	0
705 NEPAL	0	0	0	0	0
706 PAKISTAN	0	0	0	1	1
707 SEYCHELLES	0	0	0	0	0
708 SIKKIM	0	0	0	0	0
709 BANGLADESH	0	0	0	0	0
801 AFRICA (N.F.S.)	0	0	0	0	0
802 ZZ-(OLD; CENTRA	0	0	0	0	0
801 ZZ-(OLD; EAST A	0	0	0	0	0
802 ZZ-(OLD; NORTH	0	0	0	0	0
803 ZZ-(OLD; WEST A	0	0	0	0	0
801 AFARS AND ISSAS	0	0	0	0	0
801 FRENCH SOMALILA	0	0	0	0	0
802 ANGOLA	0	0	0	0	0
803 BOTSWANA	0	0	0	0	0
804 BURUNDI	0	0	0	0	0
805 CAMEROON	0	0	0	0	0
806 CAPE VERDE ISLA	0	0	0	0	0
807 CENTRAL AFRICAN	0	0	0	0	0
808 COMORO ISLANDS	0	0	0	0	0
809 CONGO, FRENCH	0	0	0	0	0
809 CEN. CONGO (BRA	0	0	0	0	0
810 DAHOMEY	0	0	0	0	0
811 EQUATORIAL GUIN	0	0	0	0	0
812 ETHIOPIA	0	0	0	0	0
813 GABON	0	0	0	0	0
814 GAMBIA	0	0	0	0	0

Exhibit 41
continued

DATA FOR U.S. AUTOMOTIVE MULTINATIONALS
PRINCIPAL MARKET OF SALES BY COUNTRY OF INCORPORATIO EST

Exhibit 41 (continued)

SALES TO EXPORT	< 10%	10%-50%	> 50%	UNKNOWN	TOTAL
CODE COUNTRY					
815 GHANA	0	0	0	0	0
816 GUINEA	0	0	0	0	0
817 IVORY COAST	0	0	0	0	0
818 KENYA	0	0	0	1	1
819 LESOTHO	0	0	0	0	0
820 LIBERIA	0	0	0	0	0
821 MALAGASY REPUBL	0	0	0	0	0
822 MALAWI	0	0	0	0	0
823 MAURITIUS	0	0	0	0	0
824 MOZAMBIQUE	0	0	0	1	1
825 NIGERIA	0	0	0	0	0
826 PORTUGUESE GUIN	0	0	0	0	0
827 REUNION	0	0	0	0	0
828 RWANDA	0	0	0	0	0
829 SAO TOME AND PR	0	0	0	0	0
830 SENEGAL	0	0	0	0	0
831 SIERRA LEONE	0	0	0	0	0
832 SWAZILAND	0	0	0	0	0
833 TANZANIA	0	0	0	0	0
834 TOGO	0	0	0	0	0
835 UGANDA	0	0	0	0	0
836 UPPER VOLTA	0	0	0	0	0
837 ZAMBIA	0	0	0	0	0
838 CONGO, BELGIAN	1	0	0	1	2
839 REP. CONGO (ZAI	0	0	0	0	0
837 ZAIRE (REP. OF	0	0	0	0	0
839 MADAGASCAR	0	0	0	0	0
901 AMERICAN SAMOA	0	0	0	0	0
902 BRITISH SOLOMON	0	0	0	0	0
903 BRUNEI	0	0	0	0	0
904 BURMA	0	0	0	0	0
905 CAMBODIA	0	0	0	0	0
906 CHINA (MAINLAND	0	0	0	0	0
907 CHINA (TAIWAN)	0	1	0	1	2
907 TAIWAN	0	0	0	0	0
908 FIJI	0	0	0	0	0
909 FRENCH POLYNESI	0	0	0	0	0
910 GUAM	0	0	0	0	0
911 HONG KONG	0	0	0	0	0
912 INDONESIA (2ND	0	0	0	2	2

Exhibit 41
continued

DATA FOR U.S. AUTOMOTIVE MULTINATIONALS
PRINCIPAL MARKET OF SALES BY COUNTRY OF INCORPORATION AT LATEST

Exhibit 41 (continued)

SALES TO EXPORT	< 10%	10%-50%	> 50%	UNKNOWN	TOTAL
CODE COUNTRY					
912 INDONESIA (1ST	0	0	0	0	0
913 JAPAN	4	1	0	4	9
914 KOREA (NORTH)	0	0	0	0	0
915 KOREA (SOUTH)	0	0	0	1	1
916 LAOS	0	0	0	0	0
917 MACAU	0	0	0	0	0
918 MALAYSIA	1	0	0	0	1
919 MONGOLIA	0	0	0	0	0
920 NEW CALEDONIA	0	0	0	0	0
921 NEW GUINEA AND	0	0	0	0	0
922 NEW HEBRIDES	0	0	0	0	0
923 PHILLIPINES	3	0	0	1	4
924 PORTUGUESE TIMO	0	0	0	0	0
925 RYUKYU ISLANDS	0	0	0	0	0
926 SINGAPORE	1	0	0	3	4
927 THAILAND	3	0	0	0	3
928 TONGA	0	0	0	0	0
929 VIETNAM (NORTH)	0	0	0	0	0
930 VIETNAM (SOUTH)	0	0	0	0	0
931 WESTERN SAMOA	0	0	0	0	0
TOTAL	81	20	15	254	370

Source: Harvard's Multinational Enterprise Database.

Exhibit 41
continued

Exhibit 42

Number of Foreign Subsidiaries Classified by Their Percentage of Export Sales and Area of Incorporation

Area	% Sales Exported				
	<10%	10-50%	>50%	Unk.	Total
	Number of Subsidiaries				
North America	6	3	1	58	68
Latin America	24	5	0	36	65
West Europe	25	9	14	108	156
East Europe	0	0	0	3	3
Mid East	3	0	0	6	9
Near East	1	0	0	3	4
Africa	4	0	0	14	18
Far East	12	2	0	12	26
Australia/New Zealand	6	1	0	14	21

Source: Exhibit 41.

Exhibit 43

Number of Foreign Subsidiaries As Percentage of Total Subsidiaries within Each Region Classified by Sales Export Levels in 1976(1)

Area	% Sales Exported <10%	10-50%	>50%	Total
	Percentages			
North America	60.0	30.0	10.0	100.0
Latin America	82.8	17.2	0	100.0
West Europe	52.1	18.7	29.2	100.0
East Europe	0	0	0	0
Mid East	100.0	0	0	100.0
Near East	100.0	0	0	100.0
Africa	100.0	0	0	100.0
Far East	85.7	14.3	0	100.0
Australia/New Zealand	85.7	14.3	0	100.0

[1]Unknowns excluded.

Source: Consultants' calculations based on Exhibit 42.

Exhibit 44

Number of Foreign Subsidiaries as a Percentage of Total Subsidiaries Within Each Sales Export Level Classified by Geographic Areas in 1976

% Sales Exported

Area	<10%	10-50%	>50%	Unk.	Total
			Percentage		
North America	7.4	15.0	6.7	22.8	18.4
Latin America	29.6	25.0	0	14.2	17.6
West Europe	30.9	45.0	93.3	42.5	42.2
East Europe	0	0	0	1.2	0.8
Mid East	3.7	0	0	2.4	2.4
Near East	1.2	0	0	1.2	1.1
Africa	4.9	0	0	5.5	4.9
Far East	14.8	10.0	0	4.7	7.0
Australia/New Zealand	7.4	5.0	0	5.5	5.7
Total	100.0	100.0	100.0	100.0	100.0

Source: Consultants' calculations based on Exhibit 42.

Exhibit 45

National Locations of Subsidiaries Exporting 10-50 Percent or More of their Sales in 1976

	Greater than 50% Exports Nation	(*)	10-50% Exports Nation	(*)
1)	Canada	(1)	Australia	(1)
2)	Belgium	(1)	Canada	(2)
3)	France	(2)	United States	(1)
4)	West Germany	(2)	Mexico	(2)
5)	Luxembourg	(1)	Argentina	(1)
6)	Ireland	(1)	Brazil	(1)
7)	United Kingdom	(5)	Venezuela	(1)
8)	Spain	(1)	Belgium	(1)
9)	Switzerland	(1)	France	(4)
10)	--		Netherlands	(1)
11)	--		United Kingdom	(3)
12)	--		Taiwan	(1)
13)	--		Japan	(1)
	Total	15		20

* the number of subsidiaries.

Source: Consultant's calculations from Exhibit 41.

9. GLOSSARY

Abroad	Refers to all countries other than the United States and Canada.
Acquired R&D Units	Refers to research and development (R&D) resources obtained through the acquisition of another organization with ongoing R&D operations.
At Entry	The point in time when a foreign subsidiary joined its multinational system by creation or acquisition.
At Latest	Refers to the most recent data survey performed by the Harvard Multinational Enterprise Project team in 1976.
Capital Market Imperfections Theory of Foreign Direct Investment	A theory based on exchange rate risks that postulates that investors in "strong" currency nations will be more attracted to investments in "weak" currency nations than local investors within their weak currency nations.
Comparative Advantage Theory of International Trade	Actually several theories of comparative advantage now exist. The basic notion, however, is that nations will be better off if they specialize in producing and trading goods and services where they have a comparative advantage relative to other nations rather than produce all goods and services solely for domestic consumption. Even when a nation enjoys an absolute advantage in all areas of goods and services, it will benefit more by specializing (and trading) where its absolute advantage is greatest.
Complementation	A program to avoid duplication and foster greater economies of scale in production by having different national subsidiaries produce interchangeable components and complementary products.

Corporate Technology Work	Research, development, and engineering work performed expressly for the corporate parent of a multinational enterprise, usually of a long-term exploratory nature.
Exited Subsidiaries	Refers to the number of subsidiaries which have left a multinational system for any number of reasons.
External Transfers of Technology	Those transfers of technology that are obtained from sources (e.g., another company) outside the multinational system as opposed to transfers originating within the enterprise and transferred between organizational units of the enterprise.
Financial Portfolio Theory of Foreign Direct Investment	A theory that states national firms become multinational in order to reduce the risks of operating in a single economy and thereby offer their investors a diversified portfolio in the sense of income streams emanating from different national economies.
Foreign	Refers to activities or attributes that occur outside the United States and Canada unless otherwise noted.
Hymer Theory of Foreign Direct Investment	A theory that states the reason for foreign direct investment is some oligopolistic advantage, most probably either economies of scale (a cost advantage) or "superior" proprietary knowledge (a product/process advantage).
Indigenous Technology Work	Research, development, and engineering work performed to produce new or improved products and/or processes expressly for a specific national or regional (e.g., European) market.

Internal Transfer of Technology	Transfers of technology that originate and occur between different organizational units within a multinational enterprise.
Local Content	The amount or share of a product's total value accounted for by suppliers and affiliates within a particular nation.
Multinational System	The network of affiliates that are owned and controlled by an enterprise. In this study minority or non-consolidated subsidiaries were not considered part of the system.
Multinational Technology Work	Research, development, and engineering work performed to produce new or improved products and/or processes expressly for near simultaneous manufacture in major world markets.
Oligopolistic Response Theory of Foreign Direct Investment	A theory that states the motivating factors for making foreign direct investments are related to "follow the leader," "bandwagon," and "hostage" relationships existing between oligopolistic competitors.
Other Subsidiaries	A term used in some tables that refers to foreign subsidiaries whose principal activity is "other" than sales, manufacturing, or R&D.
Product Life Cycle Theory of International Trade and Investment	A partial theory that seeks to explain trade and foreign investments of some U.S. enterprises that produce high income, labor saving products. The theory holds that product/process innovation provide U.S. producers with an absolute advantage initially and a positive export position. Over time U.S. producers will often make direct investments abroad in manufacturing facilities in order to protect their export markets as these markets are threatened by rising foreign competition. This foreign competition occurs as market sizes become large enough to support domestic production or when government actions (tariffs, local content regulations, etc.)

Product Life Cycle (Concluded)	effectively protect the market from lower price imports. As product and its technology become more standardized and widely available the U.S. producers share of world exports and world production levels off and eventually declines.
Production Activities	In this study, this expression refers to both assembly and manufacturing operations.
Regional	Unless otherwise noted, this term is used in an international context, where "regional" refers to groups of nations located within a recognized political/economic area (e.g. Europe, Latin America).
R&D Research and Development	In this study, R&D is defined narrowly to exclude engineering, design, testing and other activities not associated strictly with basic and applied research or exploratory and advanced development.
RD&E Research, Development and Engineering	In this study, RD&E was defined broadly to include all engineering, testing, and design activities and corresponds to reported Form the Sec's 10K figures.
R&D (or RD&E) in Support of Existing Businesses	Any research, development, or engineering activities that result in new knowledge, and/or new/improved products or processes based on conventional automotive engine and fuel technology (i.e., the internal combustion engine and gasoline).
R&D (or RD&E) to Develop New High-Risk Business	Any research, development, or engineering activities that result in new knowledge, and/or new/improved products of processes not based on conventional automotive engine or fuel technology (i.e., other than the internal combustion engine and gasoline).

Technology Transfer	A restrictive definition is used in this study that states a technology transfer occurs or is completed only when a technique, idea, or process developed by one organizational unit is incorporated in the production of products offered for sale by another organizational unit.
Transfer Technology Work	Usually development or engineering work of a technical service nature performed abroad to help "transfer" technology originally supplied by a multinational parent or other foreign subsidiary in the multinational system.
Unknown Subsidiaries	A term appearing in some tables that refers to those subsidiaries whose principal activities are not known definitely, but, for the msot part, are reportedly small sales subsidiaries.

APPENDIX: REPORT OF INVENTIONS

The work performed under this contract led to no new inventions. However, several findings were revealed about the multinational activities of the General Motors Corporation, Ford Motor Company, Chrysler Corporation, and the American Motors Corporation. These findings concerned the performance of research, development, and engineering abroad by the four U.S. multinationals, their transfer of technology, and the diffusion of their production operations.

220 copies

HE18.5.A34
no.DOT-TSC-
NHTSA-78-21
v.5
c.2 BORROWE
Univ. of Bal
Form DOT F 172
FORMERLY FORM DO

U.S. DEPARTMENT OF TRANSPORTATION
RESEARCH AND SPECIAL PROGRAMS ADMINISTRATION
TRANSPORTATION SYSTEMS CENTER
KENDALL SQUARE, CAMBRIDGE, MA. 02142

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, $300

POSTAGE AND FEES PAID
U.S. DEPARTMENT OF TRANSPORTATION
513